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THE McGILL NEWS

VOLUME 14 DECEMBER, 1932 NUMBER 1

THE GRADUATES' SOCIETY OF McGILL UNIVERSITY
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Vol. XIV December, 1932 No. 1

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This magazine is distributed to the members of the Graduates' Society of McGill University—Annual Dues $3.00. To those not eligible for membership in the Society, the annual subscription is $3.00. Single Copies, 75c. each.

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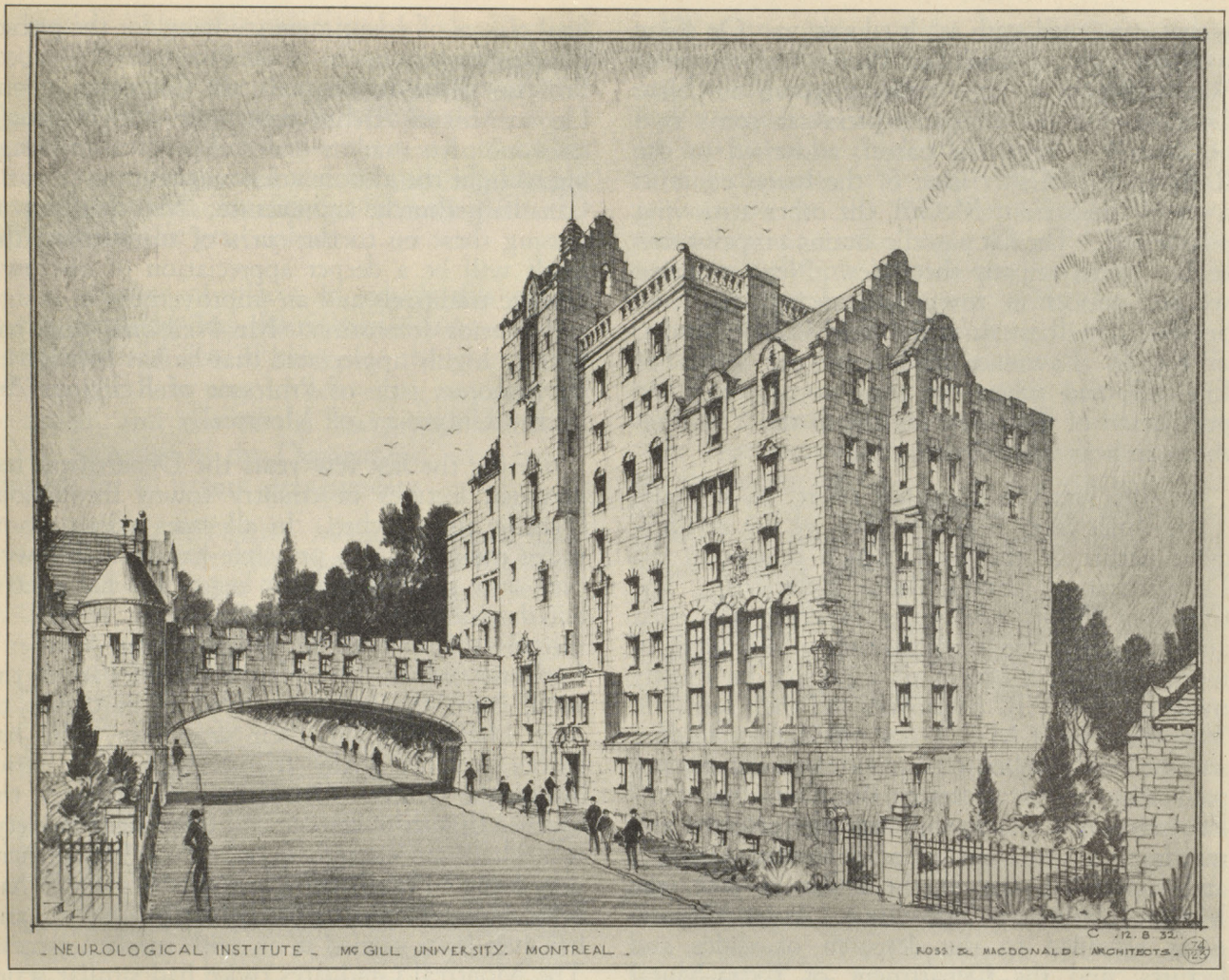
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THE McGILL UNIVERSITY INSTITUTE OF NEUROLOGY

This drawing, presented through the courtesy of the architects, Messrs. Ross & Macdonald, Montreal, shows the building to be constructed in the immediate future. The site is on the east side of University Street, above Pine Avenue, and the bridge connects the Institute with the east wing of the Royal Victoria Hospital. Some details of the building's plans and equipment appear elsewhere in this issue of *The News*.

The Department of Extra-Mural Relations, McGill University

By COL. WILFRID BOVEY

(Director of the Department)

THE Department of Extra-Mural Relations was established, as its name implies, to facilitate the activities of the University "outside its walls." Of these there are many; far more, probably, than the average person realizes. If there ever was a day when a Canadian university could live a hermit existence, considering the world from a distant mountain top of learning, that day has long gone by. We must now deal constantly with provincial, federal, and municipal authorities; with societies and institutions carrying on educational work, which we can assist; with an inquiring public; and last but not least, with the press and the radio. The primary responsibility in all these matters rests on the Principal; the Director of Extra-Mural Relations acts as his lieutenant.

Perhaps the most picturesque side of the work

is that concerned with adult education. On some winter's night, a Canadian Pacific train stops at White River, a little railway town in New Ontario, and out of the express car come two boxes and a large flat parcel, addressed to the Railway Y.M.C.A. One of the boxes contains a set of slides from McGill, the other a moving picture reel. The flat parcel contains a typewritten lecture to accompany the slides. Next morning we see notices in town announcing that Mr. So-and-So will speak at the Y.M.C.A. on India, or the St. Lawrence Valley, or the South of England; and when the time comes, half the population of the town will be in the Y dining-room to hear what he has to say.

In this small educational effort, in a town 1,500 miles from Montreal, we see the co-operative nature of the work which centres in the Department of Extra-Mural Relations. The Canadian Pacific authorities observed the need and facilitated the arrangements which were to result in a direct benefit to a population mostly made up of C.P.R. employees and their families. The Railway Y.M.C.A. provided the building and the local publicity, arranged the speakers, and paid the express charges; the Department of Education of Ontario supplied the projector and moving picture reels at a minimum expense, and supplied many of the slides at cost; the McGill University Travelling Library Department attended to the despatch of slides and lectures; and the Department of Extra-Mural Relations made the co-ordinating arrangements.

Another picture shows us a French-speaking fishing village on the wonderful Gaspé coast. The summer sunset is over; the great hills loom against the darkening sky. Presently comes the chugging of thirty motors, and the fishing fleet is back from its evening trip. The "barges" clip their way through the quiet water of the harbour. To-night the village is busy. A hall has been borrowed and fitted up with seats by the local branch of the Association Catholique de la Jeunesse Canadienne, the Catholic young people's society, and they have brought in a good section of the village population. Presently a motor arrives, a projector is taken out and carried into the hall, an extension cord is attached to the generator of the motor. Soon the people of Fox River are hearing an address in French, dealing with some other part of Canada, and enjoying the beautiful slides.

Let me say in parenthesis that another example of co-operation with our French-Canadian fellow citizens is furnished by Mr. Gordon Neilson, who gives a series of lectures every winter to the final classes of young men studying for the priesthood in the seminaries of the Province of Quebec. Professor Ramsay Traquair, the Chairman of our Department of Architecture, with Mr. Neilson's assistance, has made wonderful progress in bringing to light the almost unknown beauties of early Canadian church architecture; Mr. Neilson is passing these on to the curés of to-morrow; the result will be a deeper appreciation of our own Quebec traditions and an improvement in design and interior decoration. Mr. Neilson's work has been so highly appreciated that he has been given the honorary title of Professor of Religious Art by the University of Montreal.

During the last few years the Department has arranged lectures in country towns throughout Ontario and Quebec. In all cases a local commitee must aid; this principle has been followed ever since the Department began and has contributed greatly to the success of the effort. A special tribute must be given to the Women's Institutes, which have played a great part in the work from the beginning, and in particular to Miss Hazel McCain, their supervisor, who has encouraged her many friends to arrange series during the winter. One group of graduates, the Quebec Branch of the McGill Graduates' Society, was interested enough in what the Department was doing to take over a lecture series which had been organized some time before in Quebec, and has ever since carried it on with marked success. The Montreal Graduates twice had similar series of lectures. In some cases the lecturing is done by regular members of the McGill staff, in others, as we noted at White River, local lecturers are furnished with lantern slides and accompanying talks and, when necessary, with the lanterns themselves. The slide collection available is quite a large one, and is, so to speak, a descendant of the collection established years ago by the generosity of the McLennan family. Most of the sets are geographical, a large number of them dealing with Canada, and they are kept circulating very busily. The actual work, as already noted, is done in the Travelling Library Department at the Redpath Library.

In the winter of 1930, a trip was made to Lake St. John and Great Lake Mistassini, under the auspices of the Department of Lands and Forests, with a view to the spreading of information concerning Northern Quebec, and the comparative ease of modern transportation. Owing to pressure of time, most of the trip was made by air. An official photographer made a film, which, in spite of the weather, turned out well, and a number of slides were produced.

Another "library" maintained by the Department is a large collection of good gramophone records, handled by the central office of the Quebec Women's Institutes at Macdonald College. Records are loaned to any country school which has a gramophone, and the Women's Institutes have co-operated excellently by seeing to the provision of the gramophones.

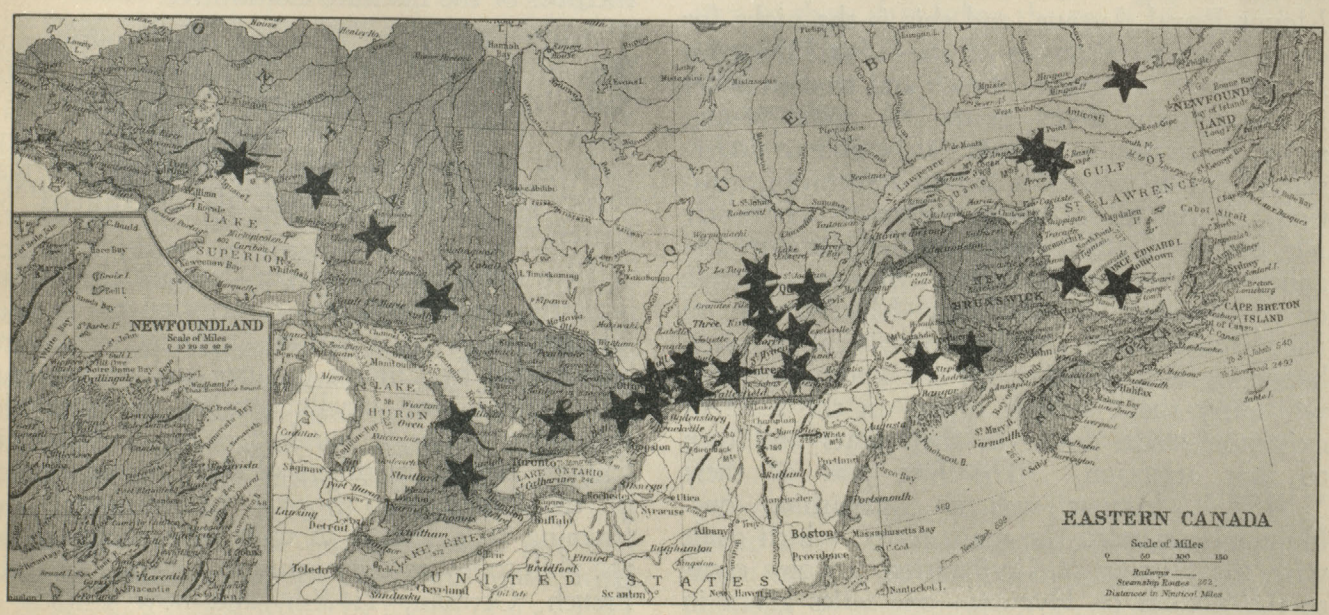
The number of places in which this extra-mural lecturing has been carried on is quite remarkable. A list of them for the year 1931-1932 is the only way of conveying any idea of its extent, and also of the heavy responsibilities of the Secretary of the Department, who is responsible for all lecture arrangements.

LYCEUM LECTURES: Montreal, Ottawa, Quebec, Fox River, St. Majorique, Peninsula, Kitchener, Ont., Owen Sound, Ont., Brownsburg, Lakefield, Ont., St. Andrews East, St. Lambert, Cowansville, Hudson, Drummondville, Abbotsford, Martintown, Ont., McMasterville, Stanstead, Cornwall, Ont., Hemmingford, North Hatley, Hawkesbury, Ont., Vankleek Hill, Ont., Lachute, Merrickville, Ont., Ste. Anne de Bellevue, Shawinigan Falls, Three Rivers, La Tuque, Granby, Compton.

ILLUSTRATED LECTURES: Montreal, Lachine, St. Lambert, Knowlton, Cowansville, North Hatley, Danville, Milton, Vt., McAdam, N.B., Brownsburg, Lachute, Aylmer East, Ulverton, Smith's Falls, Ont., Merrickville, Ont., Pendleton, Ont., Oshawa, Ont., Schreiber, Ont., Cartier, Ont., White River, Ont., Chapleau, Ont., Drummondville, Gore, La Tuque, Labrador, St. Charles de Montcalm.

Of course, this country lecturing is not the easiest job in the world, as those can tell who have done it, although it has plenty of compensations. A slow train out of Montreal at the end of a long day leaves you at Apple Hill in the dark, perhaps in a snowstorm. A hearty mail-route driver asks if you are the man for Martintown, and presently you are off along a side road, getting an occasional glimpse at a frozen landscape. You reach a little house, warm with the hot air furnace, bright with braided rugs and flowers, and clean as a new pin, where the housewife gives you a real country supper—chicken and creamed potatoes, and cake and curds. You carry your lantern to the church hall and set it up, the parson introduces you, and you give your lecture. Then you go home for a real sleep under the applique coverlet, but you hardly settle down before a knock comes at the door. "Half past five, time to get up for your drive back to the train." Early!—of course it is, but you have had a breath of country air and given a good many people a mental change and some pleasure.

In Montreal, the activities of the Department in the adult educational field are many and varied. The most ambitious project is that in which we join with the Montreal Board of Trade to provide a good commercial education for those young men and women who are kept from the University by lack of preliminary qualifications, or lack of money. The Department of Commercial Education of the Montreal Board of Trade has laid out a series of courses in Accounting, Cost



EASTERN CANADA

The wide range of the Department of Extra-Mural Relations' activities is shown by the stars on this map, each of which marks a point where a lecture, or series of lectures, under the Department's auspices, was delivered during the session 1931-'32.

Accounting, Law, English, Secretarial Practice, Economics, and so forth, leading to a commercial diploma, the value of which is already becoming recognized by the business men of Montreal, and to senior diplomas in special subjects. This value is further evidenced by the fact that the pass mark in examination is 60%.

A visit to the ground floor rooms of the Sun Life Building in Montreal on any evening in the week will show you a busy scene. Classes, large or small, are listening intently to the words of some member of the McGill staff, or some other well-qualified teacher, studying their multigraphed notes, or asking intelligent questions. You will go far before you will find a more determined and attentive group than these Board of Trade students; it is no wonder, for most have earned the money for their fees and realized by hard work in offices how valuable a training is offered them. As the whole financial and administrative burden of this is borne by the Board of Trade and its staff, it is perhaps scarcely fair to include it here, yet the Department played some part in its inception and has always been privileged to co-operate. And I should be doing less than my duty if I failed to give a word of admiration to the initiative, the perseverance, and the common sense of Mr. J. Stanley Cook, Secretary of the Board, who has been so largely responsible for such an educational effort.

Let us turn our spotlight off the Board of Trade and illuminate another building in a less prosperous section of the City. Here is the hall of the Young Men's Hebrew Association on Mount Royal Avenue, and this is the night for one of the main classes of the Adult Education Association. A stream of men and women pours in through the doors, some old, some young, some newcomers to Canada hardly able to understand English, others the second and third generation, almost all of them Hebrews. Presently Mr. Harvey Golden comes on the platform and announces that Dr. Douglas will give a lecture on Astronomy, or Professor MacDermot on Mediaeval History, and the people in the audience, hungering and thirsting for the knowledge that will carry them a little higher in the scale of existence, settle down in their seats and turn to rapt attention. The first year of these Y.M.H.A. lectures was an astonishing one. Hundreds attended the main series, which dealt with the History of Civilization. Scores came to the lectures on Hygiene—one series given in English and one in Yiddish. Scores more attended the course on Canadian Affairs given for the benefit of immigrants. This course, too, was given in Yiddish. And a respectable number of younger men took the course in Commerce.

Here, too, a special word must be spoken of those who bore the main burden of organization, Mr. Harvey Golden and his helpers. There was not much money available and it is well worth record that during the first year every worker and every lecturer contributed his time and his thought. It is doubtful whether any such educational movement has ever started on such a shoestring, yet the registration of almost a thousand students, their intense interest and their obvious gratitude, made it well worth while.

Now turn from these new Canadians and their new building to one of Montreal's oldest undertakings—the Mechanics' Institute. The Mechanics' Institute of Montreal was established in 1827 with an objective which we should, in these days, call Adult Education. Its work was in suspense during the years of political trouble which followed, but eventually it was reorganized, under the Presidency of John Redpath. The co-operation of the Institute with McGill is an old story—in the middle of the last century our professors were speaking in its halls. To-day it possesses a magnificent new building on Atwater Avenue, with a fine library and beautiful lecture rooms, and these rooms are busy day after day with activities originating at, or assisted by, McGill. Once a week the large hall is filled by members and friends of the Institute for a lecture, arranged in co-operation with the Department of Extra-Mural Relations and generally given by one of our McGill staff, presided over by a member of the Institute Committee.

Almost every day there are other courses and lectures arranged by the Department. "Miss Saint Jean's course in French," "Miss Solomon's course in German" with their classes of young bankers and business girls, housewives and teachers, all enthusiastic and all determined on success.

Two more pictures of our "outside the walls" activities must bring the description to an end. The first shows us a hall on Lagauchetiere Street. Surrounded by Chinese pictures and decorations, faint sounds and smells coming up from the restaurant below, a hundred or so of Montreal Chinese people, members of the Chinese Branch of the Hung Tao Society of Montreal, are listening to a lecture in their own language on the philosophy or the history of China. English, French, German, Yiddish, and now Chinese—adult education must use many tongues. It must have many helpers, too, and none are more enthusiastic than the members of our Chinese

committees, gathered through the kindly interest of Dr. Kiang Kang-hu. And it is something to know that in our Chinese professor we have a man who is recognized as being one of a few prominent scholars among his people. The Hung Tao Society has an English Branch, too, which meets in the Royal Victoria College, and sometimes refreshes itself by dinners on Lagauchetiere Street.

Our last picture is in Strathcona Hall. A keen audience is listening to a lecturer, who is speaking to them of books and poetry. It is our friend Mr. Burton. Look over their faces, you see the signs of education, the school look; when one of them goes up later to speak to the lecturer you hear a pleasant, cultivated voice. But there are signs of adversity, too if you look closely, and you may guess something as well from the fact that the lecture is taking place in the afternoon. These are the "white collar" men and women, too! Educated people who are out of a job—and these courses are helping them through the dreary winter. They have their own committee, which chooses the subjects and helps to choose the lecturers; aiming, as they put it, at instruction first and then at entertainment, and the lecturers, one and all, cheerfully make this contribution to the solution of a difficult problem.

A branch of university work which, as time goes on, is likely to become of greater importance, is carried on under the Extension Committee. A large number of people in Montreal are anxious for lectures of a standard equivalent to those delivered to the undergraduates, and dealing for the most part with the same subjects. Some are anxious to familiarize themselves with new developments in the sciences, some to extend the knowledge they already have, some to prepare for a university course which they hope to take, some to fit themselves for the career they are already in. So you will find a young teacher taking a course in English which will lead to exemption when she aims at her B.A., another teacher preparing himself better for his classes in Physics or Electricity, a graduate in Household Science studying Economics. The Department of Extra-Mural Relations is only concerned with the actual operation of the Extension Lectures, the Extension Committee receives all proposals from members of the staff or departments and determines whether or not the course proposed will be sanctioned as an extension course, that is to say, as a course which by reason of its subject and the standard of instruction is equivalent to undergraduate study. The difference between Extension and Extra-Mural lectures, as we use the terms at McGill, is that the latter are more general, and do not entitle the student to any recognition of his work.

A good deal has been done with radio, although here a qualifying word must be said, since the educational value of radio is still a matter for discussion. One of the original suggestions which led to the establishment of the Provincial Hour was put forward by the Department, and as a result members of the McGill staff have been giving fortnightly talks for the past three years. We have also co-operated with the National Council of Education in its radio work and in the arrangement of the series of lectures which were last year carried across Canada by the Canadian Pacific Telegraphs and broadcast through the courtesy of many stations. I must make special mention of Station CKAC, which has always willingly contributed educational time, and whose manager, Mr. Arthur Dupont, arranged the radio debate between McGill and the University of Pennsylvania which was broadcast over North America and received so much favourable comment. This year we are expecting to co-operate with the Montreal Branch of the Graduates' Society, which has instituted a "McGill Hour."

Another activity of the Department, and the last with which I can deal, has been its co-operation with the Canadian Handicrafts Guild. There is no more important effort in the field of Adult Education than that in which the Canadian Handicrafts Guild is taking part. The regeneration of rural crafts is of high economic importance in these days when the prices of agricultural products have dropped so far; the social value of rural art as a counter-weight to present day excitements, tending to steady country life, is beyond question; its intellectual value to anyone who has studied recent improvements in design and the growth of originality is undoubted. The progress of the Guild during the past few years has shown it to be well worthy all the support we can give it, and the establishment this year of a Weaving School by Mount Allison University, with a view to training teachers who will later work throughout the countryside, shows the importance attributed to the movement by at least one other institution.

Other activities of the Department must be passed over. It has certain responsibilities conferred upon it by the Corporation in the field of publicity; it is responsible for certain negotiations with Government departments, and for representation of the University before the committees

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William Templeton Waugh, M.A., B.D., F.R.S.C.

By RUSHTON COULBORN

PROFESSOR W. T. WAUGH died suddenly of heart failure at his home in Montreal on the 16th October of this year. He died at a moment early in the best years of his life, when much achievement yet lay before him. None the less he leaves at the age of 48 a record, which most men would be proud to leave as the record of a whole life. This is not solely in published works and scholarly reputation, of which he leaves much, but also in the influence upon his fellows of a great heart, a fine mind—a wise, strong, and beneficent humanity. There can be no consolation for the loss of this man.

Professor Waugh was born at Fairfield, Manchester, England, in 1884. He went to the Fulneck Moravian School, Yorkshire, and then to Manchester University, which was at that time building up the greatest school of mediaeval history in Great Britain, under the leadership of Professors Tout and Tait. He became Assistant Lecturer in History at Manchester, and in 1915 went to Queen's University, Belfast, as Acting Professor of History. Very shortly, however, he joined the staff of the War Trade Intelligence Department and there rendered most valuable service.

When Professor Waugh came to McGill in 1922 as Associate Professor of History, a new epoch was opening here in that study. His introduction of the critical standards of the best school of mediaeval history in England gave McGill students an advantage superior to that offered by many far larger institutions. At McGill the History Honours School, for this and other reasons, came in a remarkably short space of time to rank with the best schools in the Arts Faculty. Few men combine successful teaching with successful writing and research: Professor Waugh was one of those few, and excelled among them. Stimulating, broad, and crystal-clear as a writer, he shewed identical qualities as a lecturer. But he was far more than a successful lecturer: more intimate association with him gave those, who had the good fortune to have it, the opportunity of observing the innermost process of sound judgment. Waugh had a unique gift of showing to the educable the very substance of sane, mature thinking—his own thinking. Here, at the core of his intellect, flourished those qualities whose solid manifestation is to be seen throughout his career, whose ultimate possibilities were reaching fulfilment at McGill when he died. He was, in a word, wise.

As his mind was, so was his spirit. Those who were inspired by him intellectually—and they were very many, far more probably than came within his more intimate circle—were bound in allegiance to him also as a person. He was a man who inspired immediate confidence, followed readily and often by devotion. Those who loved him were of all kinds, reflecting the breadth of his own character. His students knew his rare qualities: his patience ,his tolerance, his utter integrity, his wit, his originality. A man whose time could easily have been entirely consumed upon his own studies, he never denied it to his students: he had indeed a peculiar facility in welcoming even the humblest—even the delinquents. His personal interest was readily aroused: he was ever ready to champion the unfortunate, to bear the cares of others: he never failed to appreciate a student's abilities, and readily understood the vagaries of youth. When he succeeded Professor Basil Williams as Kingsford Professor in 1925, additional cares might have been expected to force him to withdraw somewhat from his students. Far from this occurring, the number of those who had recourse to him was increased. In 1928 the late Professor T. F. Tout, Professor Waugh's old master, visited McGill. He was brought to the McGill History Club and there met Professor Waugh's students. He had himself been the leader of a great school of history, and was greatly impressed with Professor Waugh's achievement.

But Professor Waugh's influence extended far beyond the History School. He was beloved of all the students and of the staff. He was interested in student literary ventures: the Players' Club, from its foundation till his death counted him a wise counsellor. And the same is true in many other spheres. In 1930 he even took part personally in the Red and White Revue. With his colleagues too he was very popular. Sir Arthur Currie has said, "I found in him a very

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Annual Meeting of the Society

THE annual meeting of the Graduates' Society of McGill University was held in the Faculty Room of the Arts Building at 8.15 p.m. on Thursday, October 11, there being present H. M. Jaquays, President; J. T. Hackett, Vice-President; and forty-one other officers or members of the Council.

The minutes of the semi-annual meeting having been approved, Dr. L. H. McKim presented his report as Honorary Secretary. This showed that 737 members had been lost in the year, largely owing to non-payment of dues by members without branch society affiliations, and also by members of branches outside Montreal. In partial offset to these losses, 355 new members joined the Society, and life membership increased to 203, bringing active, paid up membership on September 30, 1932, to 2,770.

Following the Honorary Secretary's report, the Honorary Treasurer, W. A .Merrill, presented the financial report. This showed a deficit of $1,436.60, not including proceeds of $460 from the Graduates' Reunion, but including expenses totalling $1,519.03 incurred by the Graduates' Employment Bureau. The report noted that over the last two years the Society's deficit was only $41, despite an expenditure on the Employment Bureau of $2,267.54.

Dr. F. M. G. Johnson then presented a report as Chairman of the Editorial Board of *The McGill News*. He expressed the Board's satisfaction with the progress the magazine had made and stated that the Editor, R. C. Fetherstonhaugh, had been reappointed for another year. A saving of $276 in publishing costs had been effected in the year, but revenue from advertising had dropped sharply and the magazine showed an operating loss of $254.93. That this moderate loss had not been exceeded, Dr. Johnson pointed out, was largely due to the hard work accomplished by the Executive Secretary, G. B. Glassco.

Dr. C. F. Martin then reported for the Trustees of the Graduates' Endowment Fund, noting that preliminary steps had been taken towards fulfilment of the Society's plan to provide the University with a satisfactory gymnasium. A sum of $2,500 had been voted to provide prizes in a competition among McGill graduate architects for gymnasium plans; and a sum of not less than $2,500 a year had been ear-marked for application towards the building's maintenance when completed. As Chairman of the Executive of the Endowment Fund Committee, Stanley A. Neilson then reported that, though no general appeal to graduates had been made, owing to the prevailing economic situation, 163 subscriptions totalling $2,276.50 had been received.

P. F. Sise, Graduates' Representative on the Board of Governors, then brought before the meeting a number of points in which the Governors and the Society were interested. He noted that the Governors had accepted the Society's offer to work towards the erection of a gymnasium; that the Governors were in sympathy with the Society's desire that McGill architects should be employed to design all University buildings; and that H. M. Jaquays, retiring President of the Society, had been appointed to replace Dr. C. W. Colby on the University's Governing Board. He then explained the necessity which had compelled the Board to meet the serious financial condition that existed by a sliding-scale cut in all salaries and wages and a simultaneous increase in all student fees.

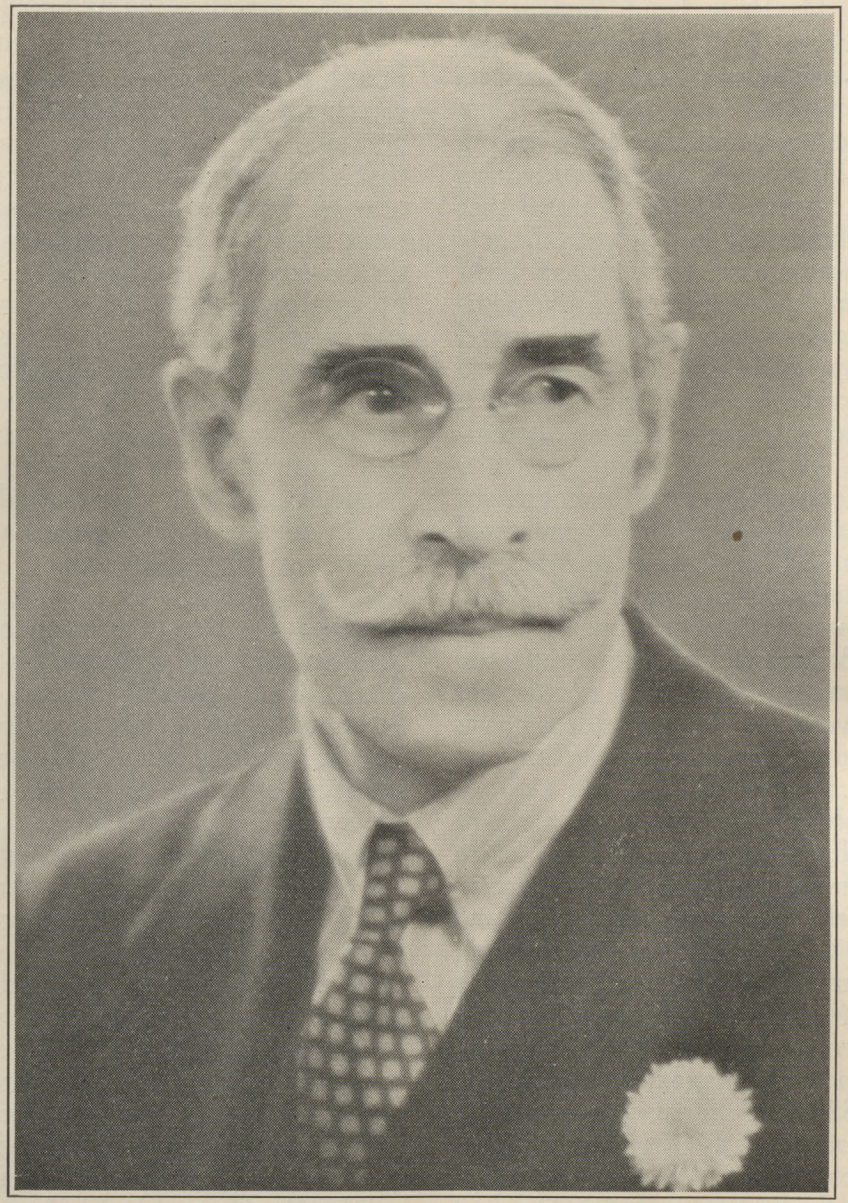
S. B. Millen then noted on behalf of the Society's Representatives on the Athletic Board that no unusual problems had arisen; and Professor R. E. Jamieson stated, on behalf of the Students' Council Advisory Board that assistance to the student body had been rendered in a number of matters, notably in regard to a magazine, *The McGilliad*, which had since ceased publication; to management of the Union cafeteria; to some points connected with *The McGill Daily;* and to investment of funds in trustee securities.

G. B. Glassco followed with a report showing that the Graduates' Employment Bureau, as mentioned elsewhere in this issue of *The News*, had accomplished notable work in a time of the greatest difficulty and had been able to place in permanent positions some graduates from almost every department in the University.

The President, H. M. Jaquays, next outlined the work the Society's Executive had accomplished in the year, work which was gratefully acknowledged in a vote of thanks to the President, proposed by L. H. Sutherland, seconded by G. McL. Pitts, and carried unanimously.

Having recorded its warm appreciation of the services rendered to the Society by Mr. Jaquays in the two years of his presidency, the meeting next took up the matter of elections, Dr. L. H. McKim announcing the result of the summer letter ballots as follows:

President of the Society: P. D. Ross, B.A.Sc. —



PHILIP DANSKEN ROSS, B.A.Sc., '78, LL.D.

Newly elected President of the Graduates' Society of McGill University.

Mr. Ross is Honorary President of the Ottawa Valley Graduates' Society of McGill University and President of the Ottawa *Journal*. An outstanding figure in Canadian journalism, the Dominion Government in 1931 offered him the Lieutenant-Governorship of the Province of Ontario, but this honour, for personal reasons, he found it impossible to accept.

Representative on the Board of Governors: H. M. Jaquays, M.A.Sc.

First Vice-President: J. W. Jeakins, B.A.

In addition to the above, A. S. Dawes, B.Sc., and A. T. Henderson, M.D., were declared elected to the Society's Executive Committee; and A. G. L. MacNaughton, LL.D., Miss C. I. MacKenzie, B.A., C. F. Stephens, M.D., E. C. Amaron, B.A., and C. E. Brooks, B.Sc., to the Council.

The results of elections of Graduates' Representative Fellows on the Corporation of the University were then announced as follows:

In Engineering—G. McL. Pitts, M.Sc.

In Medicine—A. G. Nicholls, M.D.

In Law—D. Cushing, B.A., B.C.L.

Western Provinces—A. C. Rutherford, LL.D.

Ontario—T. T. Irving, B.Sc.

Maritime Provinces and Newfoundland—J. G. MacDougall, M.D.

Outside Canada—E. E. Billington, B.Sc.

Following the announcement of the election results, Mr. Jaquays introduced the President-elect, Mr. P. D. Ross; and the newly-appointed officers of the Society assumed their duties. A vote of thanks to the retiring officers was thereupon proposed, passed, and suitably acknowledged. Elections to the Nominating Committee were then held and resulted as follows: Elected for 1 year—W. A. Grafftey; for three years—J. T. Hackett, G. McL. Pitts, and J. G. Notman.

Mr. Notman then proposed that the Gymnasium Fund Committee, composed of H. M. Jaquays (Chairman), P. F. Sise (Governors' Representative), G. McL. Pitts, Dr. A. S. Lamb, Major D. S. Forbes, and G. B. Glassco (Secretary), be reappointed to carry the work it had begun to completion. A. T. G. Durnford seconded this motion, which was carried.

On a motion of W. A. Merrill, seconded by Dr. Keith Hutchison, Messrs. Clarkson, McDonald, Currie & Co. were reappointed as the Society's auditors for the coming year; and the meeting then heard reports from P. D. Wilson, President of the Ottawa Valley Graduates' Society, and J. Grant Glassco, of the McGill Society of Toronto. G. McL. Pitts then announced the Society's new broadcasting venture, mentioned elsewhere in this issue of the *News*, and, all matters on the agenda having been dealt with, the meeting adjourned.



GORDON McL. PITTS, B.Sc. '08, M.Sc. '09, B. Arch. '16.

Newly Elected President, Montreal Branch, Graduates' Society of McGill University.

MONTREAL BRANCH

The annual meeting of the Montreal Branch of the Graduates' Society was held in the Faculty Room of the Arts Building at 8.15 p.m. on October 18, 1932. C. G. Mackinnon presided; and there were present Dr. D. Sclater Lewis (Vice-President), H. B. McLean (Honorary Secretary), Dr. Fraser B. Gurd (Honorary Treasurer), and 24 other members of the Branch.

The minutes of previous meetings having been approved, the Honorary Secretary reported an increase in ordinary membership of 112 and an increase of 2 life members, bringing the active total to 1,084, or, including the members of the Alumnæ Society, to 1,339.

The Honorary Treasurer then presented a detailed financial report, which showed a surplus of $777.27. This sum, as usual, was turned over to the Parent Society, in return for office and secretarial services rendered.

Dr. F. M. G. Johnson then announced the following nominations and the officers named were duly elected:



STANLEY A. NEILSON, B.Sc. '16,

Chairman, Collection Committee, McGill University Graduates' Endowment Fund.

President—G. McL. Pitts

Hon. Treasurer—A. S. Bruneau

Executive Council—Mrs. A. T. Bone, Dr. Stuart Ramsay, S. N. Buzzell, W. H. Howard and A. O. McMurtry.

These officers having assumed their duties, and a warm tribute having been paid to their predecessors, the following members of the Nominating Committee were elected for a term of two years: G. C. Draper, Professor R. E. Jamieson, and James S. Cameron.

The constitution was then amended so that the annual meeting will in future be held on the third Tuesday in October of each year. Assistance for the Graduates' Employment Bureau was then discussed and referred to the Executive Council for consideration. The President then outlined the Branch's activities in the past year, referring particularly to a number of social events that had been sponsored; to the Branch's co-operation in the Parent Society's plans for radio broadcasting and for the proposed hockey rink and gymnasium; and to the distribution of tickets for Convocation.

A vote of thanks to the Executive Secretary and his staff for capable and efficient work on the Branch's behalf was then proposed and carried unanimously. This completed the evening's business; and the meeting adjourned.

OTTAWA VALLEY BRANCH

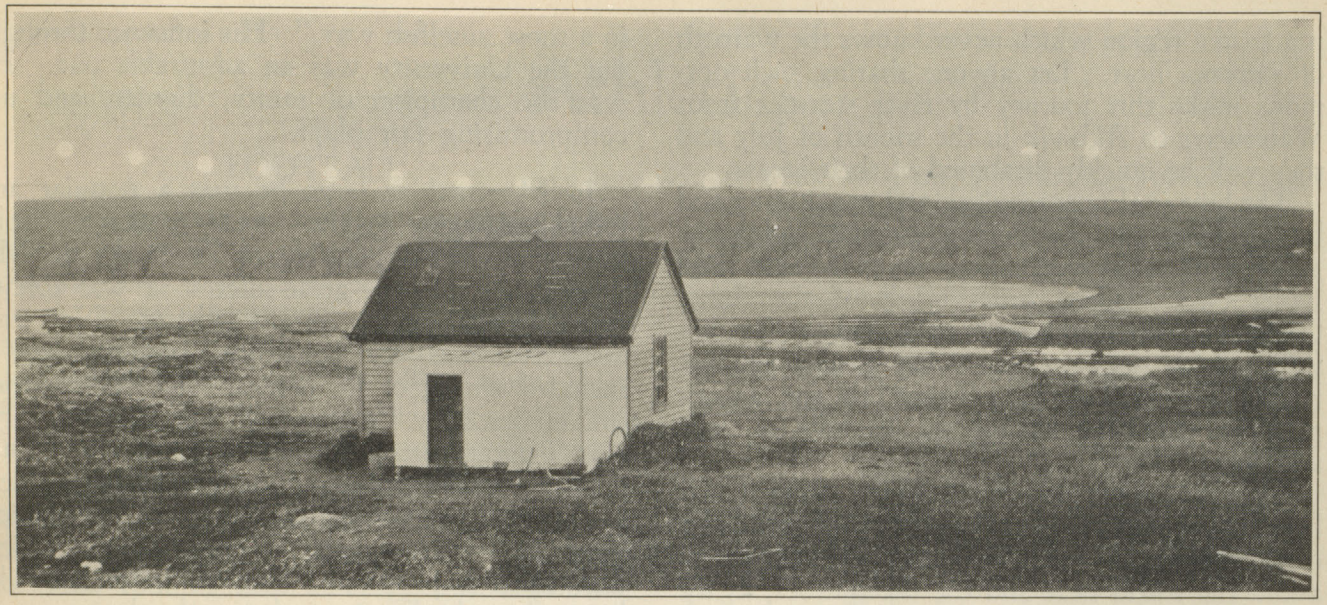
The Annual Meeting of the Ottawa Valley Graduates' Society of McGill University was held on October 20, when the following officers were elected: Hon. President, P. D. Ross; Hon. Vice-Presidents, Dr. J. F. Argue, Dr. F. W. C. Mohr, Hon. Justice T. Rinfret; President, R. C. Berry; 1st Vice-President, Col. A. F. Duguid; 2nd Vice-President, Dr. T. H. Leggett; 3rd Vice-President, G. H. McCallum; 4th Vice-President, Aldous Aylen; Hon. Sec. Treas., G. H. Burland; Hon. Asst. Sec., W. L. Rochester; Exec. Committee, Miss Olive Baskin, Miss Jean Matheson, Dr. R. S. Gardiner, R. E. Hayes, Dr. O. M. Morgan; Rep. to Graduates' Council, Dr. G. H. McCarthy, P. D. Wilson.

The Department of Extra-Mural Relations, McGill University

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of the Legislature when bills affecting the University are put forward. One day we may be arranging with the Dominion Government for a suspension of the Alien Contract Labour Act in the case of a newly appointed professor—it is somewhat of a shock to realize that the work of a teacher of zoology or classics is contract labour—another day we are discussing with the Provincial Government some detail of an act, at another moment preparing an article for a Spanish paper in South America. These are all matters which take up a great deal of time and involve a considerable amount of work, but can scarcely be interesting to the general reader.

I cannot close without observing that nothing could ever have been accomplished without the help and encouragement of the Principal and members of the staff, and those outside organizations which have given such generous help. The University obviously cannot expend more than an extremely limited amount of money on extra-mural and extension efforts, practically all the cost must be met by co-operating organizations and from student fees. The willingness of those benefited to pay their share is at least one evidence of their appreciation. After five years of existence, our first duty and our greatest pleasure is to thank those who have made our work possible.



THE MIDNIGHT SUN IN CANADA

This striking picture was taken at Herschel Island, 200 miles north-west of Fort McPherson. The camera was fixed in position and an exposure made every 10 minutes, starting at 10.30 p.m. As the film was not changed between exposures, the sun's course is clearly indicated. In the foreground is a post of the Royal Canadian Mounted Police.

The Midnight Sun

By JOHN W. CAMPBELL

THE Midnight Sun! What is the magic about these words that fires the imagination and brings tourists from distant places to witness this unusual sight? Is it the natural desire in all of us to be able to boast of having seen sights which the average city-dweller can never look upon; is it the glamour and adventure associated with the Arctic and the pushing back of civilization's frontiers, or the memories of Franklin's expedition and the heroic efforts of Rae and Richardson to ascertain its fate?

On my first journey down the Athabasca and Mackenzie rivers to the Arctic, I was impressed with the fact that night, as we know it in the latitudes further south, during the summer time was almost non-existant.

Sitting in a comfortable chair in the smoking-room of the commodious river steamer *Distributor* at Fort Smith, N.W.T., I continued to read a paper, giving little thought to time, until, finding I was alone in the room, I glanced at my watch. It was 1.30 a.m., and still it was as light as day, though there was no sun to be seen.

As we travelled down river, I was more than ever impressed with the unusual effect this perpetual summer daylight had upon the habits of the people resident in the country, and even upon the methods of transportation.

Day and night the steamer ploughed her way down stream; sometimes we would reach a post in the middle of the day, the freight would be unloaded, and the work of checking up the trading posts would be carried on apace by those who were making the journey for that purpose. Then again we would arrive at a post at perhaps 2 o'clock in the morning; everybody would be awake and hardly would the bow and stern lines be secured before the freight would be moving rapidly ashore, the passengers would embark on a sight-seeing tour, and once again the officials of the fur companies, including myself, would be busily engaged in utilizing the short time the vessel remained there to attend to the business on hand.

A peculiar feature regarding the absence of darkness, which becomes more pronounced the nearer one travels to the Arctic, is the fact that one does not appear to require as much sleep as is customary where darkness reigns for at least eight hours out of every twenty-four; in fact many of the tourists appeared to obtain hardly any sleep at all.

There seems to be an impression in some quarters even yet that the Arctic and Sub-Arctic

is a frozen region which never knows the warmth of summer heat. Let anyone sharing such opinions make this journey by river steamer from Waterways to Aklavik in the month of July and they will be quickly disabused of their ideas.

The heat is almost tropical, and mosquitoes and bull-dog flies are very much in evidence, while the growth of wild vegetation—even on the Peel River two hundred miles north of the Arctic Circle—is truly astounding, as is also the rapidity with which potatoes and other garden produce ripen, due, in a large measure, to the almost perpetual sunshine during the months of June and July.

At many of the posts north of the Arctic Circle both natives and whites have formed the habit of sleeping in the daytime during the summer to avoid the torrid heat and the mosquitoes, as the nights are more pleasant and considerably cooler.

It is not an uncommon thing to arrive in the evening at one of these posts and find the residents just arising, or having their breakfast, at 9 p.m., preparatory to entering upon the business of the "day," a feature which never fails to amuse the tourist who is making the journey for the first time.

As it is usually the early part of July when the steamer reaches the Arctic, one does not obtain a good view of the Midnight Sun until Fort McPherson is reached. Here it is seen in all its glory, as it describes a wide arc until it appears to brush the horizon for a few brief moments; then gradually it rises again, suffusing the sky with a smoky red radiance.

A good photograph depicting the movement of the sun can be obtained on an ordinary film by fixing the camera securely with the lens pointed directly towards the sun. Snapshots are then taken every ten minutes, over a period of three hours, with a minimum exposure of 1/100th of a second for each snap, commencing at 10.30 p.m. By this means one-half of the exposure show the sun sinking to its lowest point above the horizon and the balance the gradual upward trend.

Owing to the fact that the sun when it reaches the low points is not very strong, and that the light is also much less vivid than when the sun is high in the sky, it is quite possible to take such a photograph as that used in illustrating this article without dulling or spoiling the film in any way.

William Templeton Waugh

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valuable adviser. One knew that he had a fund of common sense, and one always felt he advised in a most unselfish way." His influence throughout the University was an admirable one. He was the champion of sanity, dignity, and uncompromising fair play.

In Montreal at large he was a popular and influential figure. The writer recalls a public lecture by him a good many years ago on Mediaeval life, and the great interest he was able to evoke in that rather remote subject. Not least attractive was its whimsical presentation: it included a song of the period, "Sumer is icumen in" rendered by Professor Waugh himself. He was a great success as Chairman of the Forum Club, where his broad culture was highly valued. He is indeed remembered widely for his services there: the writer recently received a communication from a prominent English journalist who lectured at the Forum and was deeply impressed with Professor Waugh. Recently too his activities were being extended to embrace all Canada, with his lecture tour across the continent in 1926, and the publication of his "James Wolfe: Man and Soldier."

As a scholar, Professor Waugh was known wherever history is studied. He was a great mediaevalist even at the age of 48, and it is sad to think of what he might have achieved and now cannot. He was one of the few Manchester men, who made the immense critical system of that school wholly his instrument, and in no sense his master. His character shewed clearly in his works. Most of his energies naturally were given to mediaeval history, but he could write a general history of Germany, the story of the British conquest of Canada, or again a history of his old school. His patience and exactitude appeared in an extreme care for truth, in the simple rhythm of his style, and in his unerring choice of phrasing. He shewed the same judgment in analysis and synthesis. Flights of imaginative theory were not an attainment of his, although he could make the shrewd guess on occasion. It is characteristic of him that, though a master of method, he scorned "methodology." He said that historical method was just commonsense.

If this notice deals much in superlatives—which I rather fear Waugh might have deprecated—it is the weakness of the writer himself. But apology is out of place: Professor Waugh cannot truly be described otherwise. His death at 48 must cause unrelieved bitterness to all who loved him. It is a tragic loss to McGill and to Canada. To the study of mediaeval history it is a calamity.

Athletics

FOOTBALL

Emerging from the lethargy that characterized their work in 1931, the University of Toronto football team, with five victories and only one defeat, swept convincingly to the Intercollegiate championship of 1932. An early season injury to Sinclair handicapped the Blue team for a time, but at no stage of the year's play was 'Varsity's leading position seriously challenged.

Opening the season on September 24, McGill presented a line which demoralized Westward intermediates and, in conjunction with good backfield running and kicking, was responsible for a victory by 22-4. A week later, Royal Military College visited Molson Stadium and suffered an even sharper defeat, the score-board reading McGill 26, R.M.C. 0.

Well pleased with the pre-season games, but aware that stiffer opposition would soon be encountered, McGill prepared to open league play against the University of Western Ontario in Montreal on October 8. The Mustangs duly appeared on this date and lived up to their reputation as champions in 1931 and as exponents of rugged football. They left a number of McGill players temporarily incapacitated; but McGill won the game by 7-6, thanks in no small degree to a run by Griffiths, who, taking a forward pass from the shadow of his own goal-posts, ran some 80 yards for a touch-down. Meanwhile, in Kingston, Toronto had defeated Queen's by 24-8.

With three regular players absent owing to injuries, McGill faced the Dominion Champions, Montreal Wheelers, in a City Championship game on Thanksgiving Day, Monday, October 10. Montreal had crushed all opposition for more than a year and was expected to hand McGill a sharp defeat, but the Red team led at half-time by 1-0, then, having fallen behind by 3-2, launched an eleventh hour offensive and, in the last ten seconds of play, kicked the tying point to the dead-line.

Injuries provided a serious handicap when the Red team played 'Varsity in Toronto on October 15. With Don Young, Hammond, Krukowski, and several others absent from the line-up, McGill fought against odds, only partly offset by the loss to Toronto of Sinclair, and suffered a 15-6 defeat. Simultaneously, Queen's were beaten in London by the University of Western Ontario by 8-5.

A week later, on October 22, Toronto moved into undisputed leadership in the league by defeating Western in Toronto 7-6; while Queen's and McGill were tying in Kingston at 12-all. McGill led by 11-3 at half-time, but Queen's brought the score to 12-11 in their favour, and only a rally in the dying moments of the game saved the Red team from defeat.

Inspired by the tie in Kingston, Queen's travelled to Montreal on the following Saturday and handed McGill a 12-1 defeat. McGill's play on this occasion was drab and colourless, and Queen's, playing straight if unspectacular football, deserved the win. Meanwhile, in London, the University of Western Ontario had loomed on the championship horizon by defeating 'Varsity 22-8.

All four teams retained a mathematical chance for the championship when play started on the afternoon of November 5, but when the smoke of battle in Montreal and Kingston cleared, Toronto, by defeating McGill 8-4, while Queen's and Western tied at 4-all, emerged as the season's champions. On the following Saturday, 'Varsity consolidated the championship by defeating Queen's 21-2, while Western took second place in the standing by defeating McGill in London by 13-8.

TRACK AND FIELD

Amassing a total of 73 points to 47 for 'Varsity and 15 for Queen's, McGill, for the fourth time in the last five years, swept to the Canadian Intercollegiate Track and Field Championship in Toronto on October 21. McGill won eight events—the 120 yards high hurdles, 220 yards low hurdles, quarter mile, half mile, one mile, three mile, javelin throw, and pole vault—and placed second in the 100 yard dash, 120 yards high hurdles, 220 yard dash, quarter mile, half mile, one mile, mile relay, running high jump and running broad jump. Phil Edwards and Charlie Drew were each responsible for 11 McGill points, with Sampson, Frankton, Worrall, Goode, Monahan, and Wallace also winning events and contributing materially to McGill's overwhelming victory.

INTER-FACULTY TRACK MEET

Two records were broken in the 60th annual inter-faculty track and field meet of McGill

University, held in the Percival Molson Memorial Stadium on Friday, October 14, when Drew, of Medicine, won the 120-yards high hurdles in 15⅘ seconds; and Stote, of Arts, won the 3-mile race in 15 minutes, 35⅗ seconds. Medicine won the meet, which is the oldest annual event of its kind on the North American Continent, with a total of 47 points, to 26 for Engineering, 23 for Arts, 12 for Law, and 12 for Graduate Studies and Research.

INTERMEDIATE TRACK MEET

Winning nine out of sixteen events and scoring 74 points to 59, McGill won the Canadian Eastern Intercollegiate Intermediate Track and Field Championship by defeating Royal Military College at Molson Stadium on October 28. This was McGill's third victory in the four years since the intermediate competition was first organized.

TENNIS

Watt, of McGill, won the singles in the Intercollegiate Tennis Championship Tournament held in Toronto on October 20-22; and Farmer and Murray, of McGill, won the doubles. Toronto, however, tied McGill in the aggregate tournament score and a play-off was ordered. McGill won 5 out of the 6 play-off matches and thus swept convincingly to the championship of 1932-'33. Last year the title was won by the University of Montreal.

ENGLISH RUGBY

For the sixth year in succession, McGill triumphed in English Rugby, defeating 'Varsity in Toronto by 11-0 and in Montreal by 28-0. Last year McGill won by 19-0 and 27-0, the score in the two years accordingly reaching the surprising total of 85-0. Under the captaincy of Butterfield, McGill fielded an Empire team with players from Bermuda, Scotland, England, South Africa, the Maritime Provinces, and British Columbia, and one player from the United States. Great interest has been aroused by the announcement that Queen's will participate with McGill and 'Varsity in the English Rugby schedule of next year.

HARRIERS

Fulfilling the expectations aroused by an excellent performance in Toronto last year, McGill harriers won the Intercollegiate team trophy at Kingston on November 5, by defeating the University of Toronto, the Royal Military College, and the Ontario Agricultural College, Guelph, in impressive style. Goode, of McGill, finished first in the 5½-mile run in 31 minutes, 30⅖ seconds; Jamieson, of McGill, was second; and the team scores were: McGill 14, Toronto 26, R.M.C. 49, and O.A.C. 54. McGill also won the Province of Quebec championship on November 11, and with it permanent possession of the Dunlop Shield; Stote, Frankton, Goode, and Jamieson crossing the finish line ahead of all other competitors for a perfect score of 10 points.

ROWING

The first Canadian Intercollegiate championship of the 1932-'33 athletic season fell to the University of Toronto on Saturday, October 8, when, for the fifth year in succession and before many thousands of spectators, the 'Varsity 8-oared crew defeated McGill by approximately six lengths. Toronto covered the 2-mile course on the Lachine Canal in 12 minutes and 1 second. The McGill crew, outweighed by 20 lbs. a man, rowed well and courageously, but finished 27 seconds behind the Toronto shell, whose crew were at no time extended.

GOLF

Archambault, of the University of Montreal, turned in a card of 150, the lowest individual score for 36 holes in the Canadian Intercollegiate Golf Championship competitions held in Toronto on October 21-22, but the University of Toronto retained the team championship as a result of the two days' play, defeating McGill by 5 matches to 4. Costello and Calder won singles matches for McGill; and in the two-ball matches the teams Brodie-Cageorge and Findlay-Calder were also victorious.

SOCCER

University of Toronto, having previously defeated R.M.C., retained the Intercollegiate Soccer Championship on October 29 by defeating McGill in Montreal by 2-0. McGill had previously played a series of exhibition games in the United States, losing to West Point and Springfield by 2-1 in each instance and defeating Amherst 5-2. Subsequently, McGill defeated R.M.C. by 7-1.

HOCKEY

McGill, having won 3 matches and lost 1, is leading the Montreal Senior Group as this issue of *The News* goes to press.



THE HOLY CITY OF KAIROUAN

"Great white-domed mosques and lofty minarets rise above its crenelated walls, pointing to the sweeping masses of white-banked clouds that roll over the dusty plain."

An Artist's Wanderings in Tunisia

By J. DELISLE PARKER

(With illustrations by the author)

A SHIP whistle, mingled with the joyous strains of "Rose Marie" from a fellow-passenger, interrupted slumbers and announced that the S.S. *Gouverneur-Général Grévy* was approaching Africa. In the early dawn through the port-hole towered the red cliffs where the lighthouse of ancient Carthage stood. A slow throbbing through the waters on which Hannibal's galleys once proudly rode and we landed at Tunis.

The writer went to Africa as an artist in search of picturesque material. What he found there exceeded expectations. But besides the fascinating life of today in Tunisia, there is an historical background of which one is always conscious, and it is necessary to dwell a little upon this past in order fully to appreciate the present.

A glance at a map reveals Morocco, washed by the Atlantic and Mediterranean, with Algeria as its next neighbour to the east, and then Tunisia, completing the three great North African possessions of France. Twenty odd years ago, Morocco was a country of barbaric rule. Marshal Lyautey, since that time, has accomplished the miracle of substituting order and civilization. The seaports of the descendants of Granada's conquerors are now ultra-modern towns; and comparative peace reigns even in the back regions of the High Atlas mountains.

Recently Algeria celebrated its century of annexation to France. But Tunisia, in the form of a protectorate, has followed the path of modern progress for just fifty years. Tripoli separates it from Egypt and that glamorous East of Haroun Al Raschid, many of whose traditions it maintains even in this age of prosaic standardization.

Tunisia has great antiquity, for Carthage, according to Greek mythology, was founded by Dido and visited by Aeneas. Long before our era, Phoenician merchants had built up there a

power that for generations could rival Rome. Prosperity corrupted them; and more than a century before Caesar landed in Britain the Roman fleet sailed across the blue Mediterranean and laid low their competition.

It is obvious that a traveller even mildly interested in the march of history, must approach this land of a great and turbulent past with considerable excitement. Visions arise of the hospitality of the beauteous queen to the wandering Aeneas, and of the scene when the Roman Senate gave instructions to its departing general "Carthago delenda est."

The city of Tunis apparently retains the dimensions and much of the picturesqueness of the days when it was a nest of corsairs. The French have wisely left the old town intact, though they have built up modern sections, and it is in the narrow twisting native streets that one finds the most interesting scenes and surroundings.

Seen from the palace of the Bey, or Sultan, the pastel-coloured walls and minarets of the old town reflect in their delicate shades all the moods of the passing day. Lost in a superb jumble of houses, the mosques tower above a perplexing mass of light and delicate shades. Beyond the city walls glitters the Bay of Tunis, with the distant Carthaginian peninsula and the jagged mountains opposite on the right, all contributing to a background of unique beauty.

The topography of ancient Carthage, in conjunction with Roman descriptions of its many high buildings and commercial grandeur, almost suggests the Manhattan Island of today. This New York of antiquity, however, was so thoroughly destroyed by Scipio that few traces remain. The military ports, through which the Roman general battered his way after a year or more of fruitless investment, still vaguely exist. From them to the hill on which stood the great temple and other prominent buildings is but half a mile. Nevertheless, it took the Romans seven days of sanguinary street fighting to reach the foot of the hill. When they did so, the leading inhabitants, gathered on the great stairway above, or in the temples, committed suicide en masse, as the surrounding buildings—the heart of ancient Carthage—went up in flames.

A large Byzantine church, a museum, and the buildings of the White Fathers now occupy the site of the temples of the Punic Acropolis, where in 1270 St. Louis of France died amid his army of sorrowing crusaders in the attack on Tunis. The venerable Father Delattre, whose recent death is lamented by many of his old friends in Montreal, which he loved and never forgot in the long years since his residence there, unearthed many of the finest objects of ancient Carthage yet recovered. Thanks to the tireless efforts of this scholarly priest of the Pères Blancs, and to the work of a few American enthusiasts, we now know much more about this almost obliterated commercial centre of the past than was known in the earlier years of the present century.

Often an Arab farmer has offered to the writer, when sketching in the vicinity, a handful of ancient coins dug up in the nearby fields. A bag of these, now in Victoria, B.C., serves to recall the Punic wars, the great Roman city in which St. Augustine lived and taught, the inroads of the devastating Vandals, the Byzantines of Constantine, the conqueroring Arabs of Mahomet's companions, and the Spaniards of the Emperor Charles the Fifth. To lay aside a sketch and purchase for a few cents a coin excavated from the site of a town, or series of towns, with such a past, and now a rather desolate suburb, provides food for reflection on "the strange mutability of human affairs."

The covered markets of Tunis, vibrate with the spirit of an Orient that is disappearing. The fascinating flow of life through these long corridors, the endless variety of costumes, form, and colour make one realize that much of the charm of the East, as conjured up in childhood visions by the immortal tales of Sherezade, still exists. Traders from distant Arabia glide over the worn pavements, lingering to barter over bright hued garments, over rugs from Kairouan, Persia, or Central Asia, or over yellow and red leather slippers, perfumes of jasmine, and other commodities. To describe briefly the picturesqueness of the markets of Tunis, among the most exotic in all the Orient, is impossible. By day or night as one wanders past the shops on both sides of these mysterious passages one finds, either by the light that filters through the holes in the white stone ceilings, or by the flickering glimmer of great zinc lanterns, an endless bewilderment of interest. To leave Montreal in winter, and a few weeks later to land here, is like stepping to a new and strange planet.

In the midst of a riot of colour and form rise the minarets and arches of the Great Mosque and Moslem University of the Olive Tree. Access to these is forbidden to Europeans, as notices in many languages indicate at the doors. Since the Mosque was founded in A.D. 698, when the religion of the Prophet was young, it has the privileges of its creed and antiquity. However, one can gaze at the Eastern undergraduates, of whom there are perhaps a thousand,

as they pass in and out, wrapped in their voluminous bournouses, or white cloaks, with the ends thrown over the shoulder. They strangely recall statues of Greek philosophers, if one disregards the red fez and the long blue tassel.

The Slave Market still exists, but in the buildings and in name only. The vaulted arches, with red and green painted stone columns, stir the imagination, for not only were sold here negroes brought from Central Africa across the inferno of the Sahara, but also men and women of our own race, captives of the Barbary pirates. Where the turbaned merchants now sit, sipping cups of coffee or mint tea, the human spoils of captured American and European ships occupied the attention of their ancestors some generations back. When "Old Ironsides" was sent to the Mediterranean by the youthful American government to bomb iniquitous Tripoli, it would apparently have been justified in chastising Tunis also. As two sides, or approximately one-half, of Tunisia's boundaries are coastline, the country from time immemorial has been the prey of attacking ships, or in turn has taken to the sea for a livelihood, using fair means or foul.

From the harbour of Sousse, one swings inland by a train that climbs the hills to a plateau on which stands the holy city of Kairouan. Great white-domed mosques and lofty minarets rise above its crenelated walls, pointing to the sweeping masses of white-banked clouds that roll over the dusty plain. The most sophisticated traveller, if he survives the odours of this untouched Oriental town, is compelled to share an artist's rhapsodies on entering the courtyard of the Great Mosque. This architectural gem, with its high orange-tinted tower, topped by a perfect harmony of white balconies, stands out majestically against the deep blue patches of sky and moving clouds. Here, at least, is one dream of the East that is not shattered by reality.

Under its walls great caravans of Bedouins with their families, camels, horses, donkeys, dogs, and flocks of sheep have swept by since the eleventh century, when Sidi Okba, the great captain, built the tower, There was a period long ago when these wanderers conquered and devastated the entire land. To the present time, if one is at Kairouan when the tribes pass through seeking other pasture lands, it is possible to witness the pageantry of primitive eastern life in its marvellous setting.

From Sousse, headquarters of the Cavalry Regiment of the Foreign Legion, we journeyed south to Sfax and the border of Southern Tunisia, which embraces part of the Sahara. It was the period of the Mi-Carême carnival, which is celebrated in this old Carthaginian port with great spirit. The local garrison, consisting of a crack regiment of Spahis, a colourful unit of Arab horsemen, and Senegalese riflemen, contributed to the gay procession. The Senegalese, by means of motor floats, reproduced scenes, wedding ceremonies, and dances of their primitive native



THE 4th SPAHIS AT SFAX

This crack regiment of the Colonial Army of France is shown taking part in the Mi-Câreme festival which is a feature of the garrison's life at Sfax each year.

surroundings in the jungles beyond Timbuctoo with extraordinary artistic skill and feeling for dramatic values.

It was the writer's good fortune to live many months among these African troops of France, whose record as part of the Moroccan Division at Verdun and on the Somme was unsurpassed. With singular wisdom, the French Government sends to its sun-baked colonies many of the finest of its officers. Since its policy towards its possessions is one of sympathetic but firm subjection, including the system of national conscription, the rôle of the officer becomes almost diplomatic as well as military in character. Being the commander of a greater number of men than is the custom in most armies, considerable responsibility is often thrust upon even the young lieutenant just out of the military school of St. Cyr. These officers, young and old, obviously inspire their men with a fine *esprit de corps*.

In this southern region the honest jet-black faces of the Senegalese troops are seen the most frequently. There is, however, another unit, the Premier Régiment d'Infanterie Légère, unofficially known as the "Batt d'Af" (Bataillon d'Afrique), or "Les Joyeux," of an entirely different character. It is composed of white troops, the trouble makers of the Army, sent into the desert to reform.

As for the Spahis, with their white turbans, long flowing red capes, and sprightly Arab steeds, one sees a most picturesque regiment, with a fine military reputation. Among their officers' names are those of noble families, which appear on the battle-roll of France from the Crusades to Verdun. Rows of service bars and decorations for valour are worn by many. All, officers and men, are magnificent horsemen, and entire squadrons are capable of the trick-riding usually associated with cowboys and Cossacks. The Fourth Spahis, at Sfax, seemed in brief to justify our romantic dreams of Arab cavalry.

Off the extreme south coast of Tunisia, in the Gulf of Gabes, lies the Island of Djerba. Homer refers to it as the "Isle of the Lotus Eaters." Ulysses, it will be remembered, had hard work to persuade his men to leave the island and return to the ships, where he tied them up and immediately set sail to avoid further temptation. There is much doubt as to the exact nature of the fruit indicated, but none as to the beauty and charm of this "island of the golden sands." Covered with palm trees, picturesque villages, and one little town that is a painter's paradise, Djerba is comparatively unspoilt by modernism or tourists. Its Berber inhabitants are of a sturdy, ancient, and hospitable race that existed long before Mahomet's followers carried the Crescent banner and devastating sword across North Africa. One is invited to their weddings, which include a week or more of mass dancing, tom-toming, and feasting night and day; and to dinner in their homes where, according to Mohammedan tradition, the ladies of the family are never visible.

Gabes is a frontier settlement at the end of the rail. This little garrison town, in spite of the fact that it is frequently referred to as the most God-forsaken of spots by permanent European residents, is the scene of Miriam Harry's famous "Divine Chanson" and other novels. It is also the depot of the disciplinary regiment already mentioned. Here are drilled the wicked lads of the "Batt d'Af", to use the slang of the Paris Apache, who knows the unit only too well. In the stirring romance "Les Réprouvés" by Armand Amandy, the men of the Regiment march out from Gabes to a desert fort and are wiped out defending it against the tribe of a border chief. As a matter of fact, the Regiment of black sheep almost equalled the exploit in real life. The anniversary of this event is still celebrated by these rough lads, who are subject to even more severe discipline than those of the Legion, but who also, at least, know how to die.

Outside the town is a great oasis that is something of a Garden of Eden, with its hundred thousand palms and countless rippling irrigating streams. It is an enchanting place in which to wander and forget for a while the woes of this world. Tourists who take their first camel ride through it receive the romantic thrill of their lives. For Gabes is indeed "the stretch of land that just divides the desert from the sown," with probably more than one Omar Khayyam in the oasis, drinking the "laghmi" juice of his trees and passing his time in peaceful contemplation.

In the region to the immediate south begins another world, where the Sahara plays a stern rôle. Before reaching it, one skirts the bare peaks of the Matmata range, acting as a protective barrier against Tripoli and thrusting its rugged mass like a spearhead into the desert.

High up in these mountains is Matmata, one of the strangest places in the world. Hundreds of families live there and yet, on arrival, one does not see a single house. True there is a market square, flanked by arcades and stores, and nearby the white minaret of a small mosque. Otherwise there is nothing apparent but desolation and a sun-baked road leading by some olive groves up the pass to the fort, or "Bordj." On closer investigation, one discovers here and there great



A SENEGALESE FLOAT IN THE CELEBRATIONS AT SFAX

Senegalese troops of the French Colonial Army enter whole-heartedly into the Mi-Câreme festival at Sfax, portraying with vigour and a keen sense of dramatic value scenes from their primitive native surroundings beyond Timbuctoo.

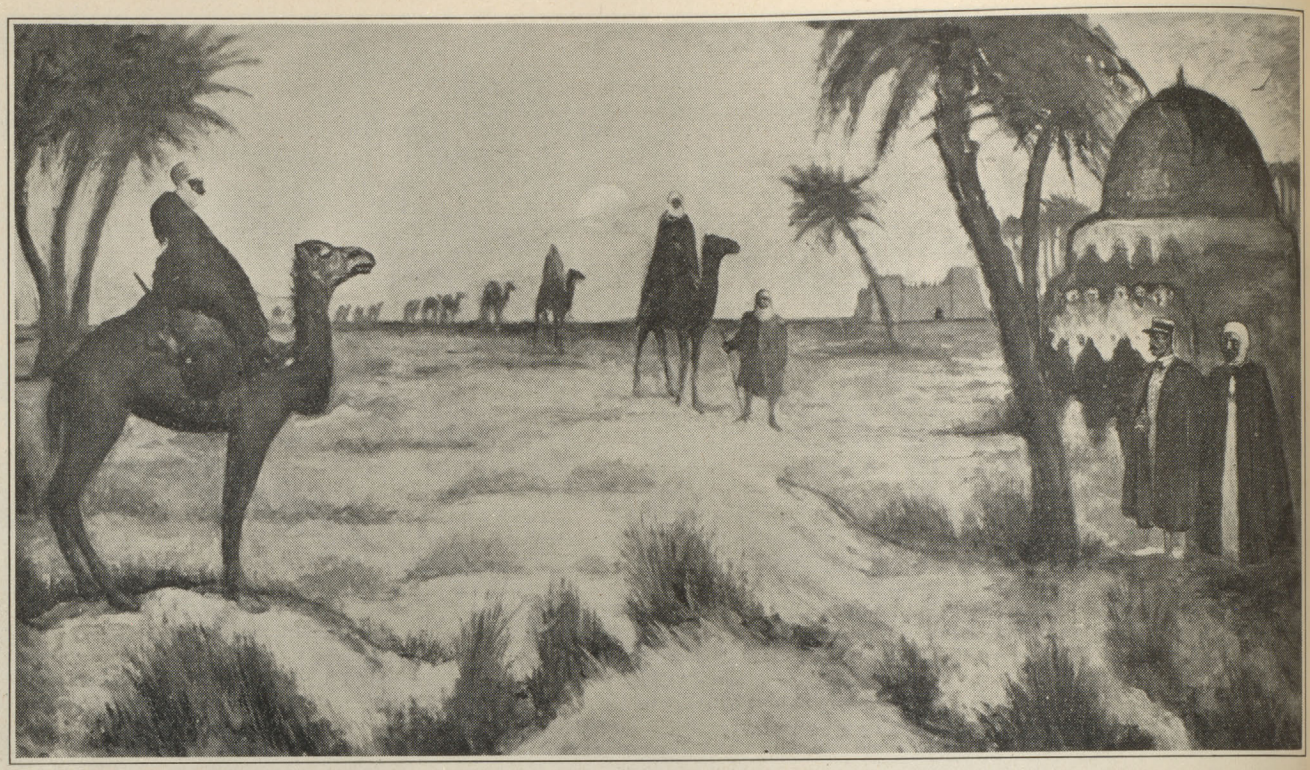
holes in the earth, and down below several floors of windows and doors, wells in the courtyard, and wild Kabyle dogs yelping savagely. Until a century ago, this curious race of the Trogoldytes, ancient even in the days of Roman and Greek writers, preferred cliff-dwelling to this method of digging their homes in the gound.

It was in the mountain fortress of Matmata that the writer obtained an introduction to the manner in which France keeps order in the desert. As the South Tunisian area is military territory, the permission of the commanding general and an armed escort were necessary for our caravan, before proceeding. Moreover, Italy was just then vigorously attacking the last of warlike Tripolitan tribes across the southern border. The possibility of encountering stray pillaging Touregs, or even Robin Hoods of the Matmata region, furnished good reason for an escort of the desert patrol, who steer with uncanny intuition through the barren country, without compass or landmark, and avoid danger of going astray. Nothing was likely to happen, but prudence and experience in the shape of a stately blue-cloaked Arab on a prancing white steed rode at the head of one file of our grunting camels, as we waved adieu to the French officers of the fort.

From the wind-swept town of Tamezred, resembling a great pile of stones, arranged vaguely in the form of houses on a mountain top, we left the biblical looking sheik, who had so kindly welcomed us, and plunged down the passes to the sandy surfaces, where our camels felt more at home. And thus we finally arrived at the lonely well of Bir Sultane, sheltered from the blast of sand storms by a white dome.

The tawny desert in endless wave after wave of bare undulations disappeared gradually through the mist of heat and drifting sand. To the south was the suggestion of an aching desolation in which we knew a traveller would not encounter more than a fort or two in a thousand miles before coming out on the other side of the Sahara. We had received orders to march west as quickly as possible, to avoid the interference of any lawless sons of the desert.

As the camel drivers were filling their water skins, a fantastic and lofty apparition appeared in the mist. To our relief, we soon discovered that it was caused by the long legs and neck of a Mehari racing camel, and a blue-mantled rider of the desert patrol. The trooper's face appeared as a black spot from amid the white desert headdress, of the type we ourselves wore. With rifle



CARAVAN ARRIVING AT FORT DOUZ.

The fort and oasis at Douz in the South Tunisian Desert provide a welcome sight to the traveller, wearied with the long approach across endless miles of sand.

strapped on the side of his high Taureg saddle and a small kit-bag of provisions, this Meharist had been sent to guide us through the next stage of our wanderings. Word had been flashed from the fort at Matmata to the officer in charge of native affairs at Kebili, naming the probable day and hour of our arrival at Bir Sultane. On both sides we had punctually kept our lonely rendezvous.

Among the most pleasant memories of the period that followed are those of the evening camp-fires. As we sat in a large circle with the stars twinkling in the moonlight that gently caressed the boundless steppes around us, it was the custom to relax and drink many cups of strong sweet tea, flavoured with mint. Our guide, Mansour, would puff away at his long wooden pipe and his keen face and eyes would light with animation as he told us of a life spent entirely in desert land or oasis. The camel drivers indulged in songs whose strange guttural and nasal tones had charm in these surroundings. And once the writer told, chiefly for the benefit of our escort, of the Royal Canadian Mounted Police, who also had brought and still maintain order in vast remote regions, far away over the seas in a country called "Canada." The attempt to describe the Dominion in its winter garment, was difficult, as most of the men had never seen more than a few flakes of snow. A great land covered with some feet of snow seemed to them like another hemisphere, and the thought of it placed a strain on their credulity and good nature.

One day the caravan entered an area of high dunes and for some time switchbacked up and down mountains of soft and pure white sand. This was the sort of desert familiar to all in photographs, generally with an Arab saying his prayers and a camel standing sneeringly aloof behind him. Working our way through it, the usual monotonous rhythm was resumed on more even ground. The caravan was stretched out for over half a mile; we were leaning wearily over high saddles, mechanically swaying for the millionth time on our supercilious camels. For days there had been no rest for man or beast; and this was the ninth hour of travel. Suddenly the leader turned in his saddle and pointed ahead as he cleared the brow of a hillock. Straining our eyes we could faintly see, as in a mirage, the palms of an oasis. They were the first trees on our path since we had left Matmata. The sunset blazed in all its golden oriential colours as we entered the Oasis of Douz, which was our objective.

The aftermath to that desert journey came some

(Continued on Page 44)

Our Canadian Speech*

By SIR ANDREW MACPHAIL

THE young men and women at our universities have just made the painful discovery that a graduate does not thereby enter automatically upon an easy and assured way of life. His degree may even be a handicap to him, when he finds himself in competition with fellow-workers who entered business as boys, and have now an established place. It comes as a shock of surprise that he has acquired at the university neither a profession nor a trade; neither an education nor a good manner of speech; and it is by this he is judged.

The mediaeval student went to the university so that something might be done to his mind and voice. His degree merely meant that he was qualified to teach in beautiful words what he had learned with labour. His living came to him as a teacher. The modern graduate who is fortunate enough to secure a foothold in business finds in his employer a perplexing obstinacy against being taught anything by the most recent acquisition to his staff.

More still, the modern business-man is quick to discover that the modern graduate who has followed only a technical or purely scientific course may be quite illiterate. He may be unable even to speak or write a correct English. This is not entirely the fault of the university, since the staff cannot in four years do what should have been done in the home and in the school. Besides, many of the young instructors in the professional faculties are only a little more literate than the graduates. Their own course has been purely technical; and any man is illiterate who does not know some Latin and something of Greek. Without this they cannot understand the mystery of the objective case.

For the present, we are not concerned with what graduates know, nor with what they say. Our special theme is the voice they use, in short, Our Canadian Speech.

To restrict the theme still further, I omit from reference the French-Canadian speech. They have their own society for its improvement. Many of them make long and frequent visits to Paris, with the result that their professional classes speak the language as well as it is spoken in France. Still more strange, they speak and write English better than we do. He who speaks only his native language becomes careless,—his words worn out, debased by usage. He who speaks a language that is learned anew gains a freshness and a precision in the value of words. For that reason, the best English in the world is spoken in Dublin and Inverness, where it has had to compete with the native tongues.

Ignorant people from France pretend that the language of Quebec is a dialect or patois. Canon Chartier has dealt faithfully with them. It is merely an older French. If Shakespeare or Chaucer, Racine or Corneille were alive to-day, they would equally be considered as speaking a patois. It will be time enough to level this reproach against Quebec when they have catalogued the dialects and patois now spoken in France.

When I speak French in Europe, I am credited with being a native of Languedoc, where they speak the worst French in the world. He who would know the best that is thought or written must read French. He who would succeed in Canada, must speak French; and he will at the same time improve his English.

What then is the Canadian Speech? There is none. There is a variety of accents,—the dull monotone of the Maritime Provinces; the flat vowels of the Ottawa Valley; the narrow voice of Ontario, as if there were no vowels in the language, improved however in the Niagara district when it comes in contact with the softness of the negro. All these differ among themselves by a variety of coarseness, made still more distinct in places where the foreign voice prevails.

I am not saying that we should speak in the same voice, any more than I should say that all should sing in the same voice; but all speech may be beautified. The speaking voice can be trained in beauty by the same process that is applied to the singing voice. The human ear detects and detests a flat note in singing. The flat vowels in our Canadian speech are equally unpleasant. We can remedy that by taking thought, by listening acutely to beautiful speech, and listening with equal acuteness to our own. Any form of beauty is an asset in the struggle of life.

I am not saying either that we should sedulously ape some imported accent, English or any other. In England there are as many dialects and accents

as there are counties. These are the familiar material of the comic stage. Even Shakespeare found them amusing. Which dialect shall these imitators choose? Shall it be the Cockney, or the dialect of Lancashire, Somerset, or of Devon? For: If I be; If you be; If they be; the English of Devon say: Ef so be as oi be; Ef so be as yü be; Spoas'er be. For: Let them be, they say, Lave um baide. Even if we would repeat the words, we cannot catch the musical tone in which they are spoken.

A man's speech instantly betrays his place in the world. It reveals the stage of his culture. In the main, the people of England are divided into two classes according to their management of the letters H and R.

When Jephthah would distinguish friend from foe at the passage of the Jordan, he compelled them to pronounce the word Shibboleth. If they could not frame to pronounce it right, and said Sibboleth, they were taken and slain, to the number of forty and two thousand. When Texas was an independent republic, Col. Bowie, he of the bowie-knife, made a decree that any Yankee attempting to cross the Red River should be hanged. When asked for a distinguishing sign, he ordered that every immigrant should be compelled to pronounce the word "cow."

In England, a man cannot pass from the lower to the higher social scale until he has mastered the letter H; and few succeed in the attempt. The use of the letter R is a more delicate test. In a moment of excitement, sofa becomes sofer; and law becomes lawr. A well known English actress, Marie Law, hit upon the happy device of calling herself Marie Lohr, l-o-h-r, a name that every one could pronounce.

But in England there is a standard of beauty and an established correctness of speech which all strive to achieve if it is not theirs by right; and they conform with that standard when they are to the manner born. These shades of distinction are important in an old society where competition is fierce. Up to the present, the possession of a university degree was accepted in England as an evidence of culture; and the final test was the length of time that elapsed before a man would tell you that he had been to the university. In the case of the most cultured Englishman I ever knew, I waited thirty years for the disclosure, and discovered after he was dead, that he had never been to a university at all. We cannot copy an alien speech. We may learn from it how to improve our own.

The American Shibboleth—and Canada is in America—is the word Yes. A catalogue has been constructed from which it appeared that the word can be pronounced in 37 different ways. For easy learning the catalogue has been put in rhyme. It begins: Eah, Yah, Yak; Yis, Yus, Yep, O.K. A young man can choose his own place in this range of vulgarity, and define his proper place in the world. If he resents the suggestion that he speaks ill, as if it were a social lapse, the fault and loss is to himself.

Up to our time, the theatre displayed a standard of good speech; but the theatre went down in face of the moving pictures. There was at least silence. Then came the human voice from the mouth of a machine, which destroyed any beauty there was in the spoken word, as the other machine has destroyed the beauty of music. In both, the overtones are lost; and we are becoming tone-deaf, incapable of hearing the subtle and rhythmic beauty either of words or of music.

But in the last few years, the theatre is reviving through the efforts of Repertory and amateur groups. It was instantly discovered that an actor has no place upon the stage unless he can speak in a beautiful voice; unless, indeed, he is content to appear as a comic character, winning applause by his appeal to the ridiculous. Even in Hollywood, they have opened schools in which English is taught.

Good speech is now an asset for a house-maid, a nursery governess, a school teacher or a professor. This economic necessity will accomplish what aesthetics could not. One exception should be made. A man who is fortunate enough to have acquired the accent of Edinburgh, Glasgow, Dundee, or Aberdeen, would do well to develop it. The possessor is looked upon as honest, diligent, capable, and not essentially stupid. He is always sure of a job.

In all these dramatic groups, there is an insistent demand for Canadian plays; but the Canadian Tragedy is the kind of tragedy too many of these young Canadians write. It is technically known as "shanty-stuff". In too many, the characters are mean and unworthy—miners lusting for gold, drunken lumbermen, ruined pioneers, insolent city picknickers; and these characters speak a coarse jargon, in which the sordid is mistaken for strength. This is not tragedy; it is nightmare, the speech as coarse as the words. In this there is no hope.

The young man who has his way to make in the world submits himself to judgment. That judgment is swift and superficial. The first count is good manners and good speech; and for some strange reason good speech and good manners are inseparable. If, in addition, he can write a sentence correctly, he is judged to be an educated

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BEFORE THE DAYS OF ANAESTHESIA

This caricature, made by Rowlandson in 1793, portrays with only moderate exaggeration the surgical methods of the 18th century, and vividly emphasizes the boon that modern anaesthesia has given to civilized man.

Discoveries in Medicine by Laymen

By G. EDWARD TREMBLE, Med. '21
(With illustrations by the author)

THE common belief that all great discoveries in medicine have been made by physicians and surgeons is erroneous. In the study of medical history, one is struck by the fact that the majority of outstanding discoveries have not been achieved suddenly, but have come about by progressive steps; and the layman has often made these discoveries before the medical practitioner. Many examples of this are to be found and are interesting as well as instructive.

The ancient writers of the Talmud,[1] for example, understood massage with oil inunctions; diapheresis by means of warm baths; and, most noteworthy, bleeding for full-blooded people and abscess in the throat (quinsy). The therapy of water was also crudely known. Even hypnotism was resorted to, but without any appreciation of its real nature. By laying on of hands, hysterical persons were cured of blindness, paralysis, hysteromania, and catalepsy.

The treatment of intermittent and remittent fevers by the Winnebago and Dakota Indians is an emetic or cathartic, followed by a vapour bath

in the sweat-house, and then a cold plunge. The after-treatment consists of a tonic made by an infusion of the willow. In rheumatism they rely almost wholly on the vapour bath, also the black cohosh (*cimicifuga*) in decoction, treatment hard to improve on, even by our modern methods. For mucous enteritis and dysentery they rely entirely on a mixture of buttonwood bark, or American sycamore, which is singularly effective in their hands. They also use *Geranium maculatum* (cranesbill) as an astringent.

The Gros Ventres and Assiniboine Indians have learned that it is necessary for the skin, bowels, and kidneys to perform their several duties. They induce perspiration effectually by means of their sweat-houses. These are about four feet high, eight feet in diameter, and sunk one foot below the level of the ground. In the centre of the dug-out, which is covered almost air-tight with blankets, are placed hot stones, over which hot water is poured, and the occupants thus get a steam bath. Then, unless it be freezing weather, the bathers go to the river and plunge in. Continued bleeding, always an alarming symptom, is controlled by an ingenious method. Recognizing that an unarrested hæmorrhage means death, they use compression and spider's web, the latter to favour clotting of the blood.

The story of quinine is mentioned in a number of books on medical history. In the seventeenth century the wife of the governor of Peru was attacked by malaria and became dangerously ill. The natives gave to a Jesuit missionary, who worked among them, bark from a certain small tree, telling him to grind it up and give it to the countess at regular intervals. She recovered and, being of a philanthropic disposition, obtained a quantity of the powdered bark and sent it to Europe for use among the poor. In due time, the trees and plants were botanically investigated and named in honour of the house to which the countess belonged "Cinchona." Today cinchona bark or quinine is used the world over as the specific treatment in malaria.

The Aconitum[2] of the Greeks and Romans refers in all probability to the *Aconitum napellus*. The ancients were well aware of the poisonous properties of the aconites. It was used by the early Chinese[3] as an arrow poison, and is still in requisition among the less civilized of the hill tribes of India. Something of the kind was in vogue among the aborigines of ancient Gaul.[4] "The use of buchu leaves[5] was learned from the Hottentots by the colonists of the Cape of Good Hope." At a very early date camphor seems to have been a well-known medicine among the Chinese, and menthol among the Japanese.

Coca leaves[6] were cultivated by the Incas prior to the Spanish invasion for use on long journeys, to ward off fatigue. This fact drew the notice of Europeans and the discovery of coca and cocain resulted. There is a custom among the Peruvian natives of searching old graves to recover sacred relics. When these graves are opened, although there is no apparent odour, those who explore them are liable to get a sore throat from inhaling the vapours or impalpable powder into which the bodies fall as they are exposed to the air. It has long been a custom to fortify against this condition by the use of coca, thus illustrating the intuitive adaptation of a native remedy empirically, which has required long years of scientific study to apply in the treatment of throat infections. The modern nose and throat surgeon makes use of cocain daily and considers it one of the most valuable drugs in his branch of medicine.

Although dentistry is regarded by some as a modern science, it is interesting to note the following Mexican treatments which were in vogue before the Spanish Conquest: "Inflammation of the gums is cured by lancing them with an obsidian knife and rubbing in a little salt with the finger. Or heat a red pepper or capsicum and press it along with a grain of salt as tightly as possible on the painful spot. If these remedies do not suffice, draw the tooth and put a little salt into the hollow place." Centuries of experience had taught the natives the value of capsicum as a counter-irritant and of salt as an antiseptic.

There is no doubt that the use of collodion as a flexible dressing is foreshadowed in the way the Mexicans burned or cauterized wounds and then covered them with the melted juice of the ulli plant—the india-rubber plant.

Curare, under the names of curara, woorara, wourali, etc., was used by the natives of Demerara and the valley of the Amazon to poison their arrows. An animal wounded with one of these arrows soon lags behind the rest of the herd, and quietly dies without any sign of suffering, in fact, appears to go quietly to sleep. It was found, however, by Europeans that although such animals were apparently dead, their hearts could be felt beating vigorously for a considerable time, and if an artery were cut across the blood was ejected forcibly from it. It therefore occurred to Sir B. Brodie in 1812 that if he could keep up the respiration until the poison was eliminated the animal could be saved. This was done, and a most valuable agent for physiological experimentation discovered and given to medicine.

Tannic and gallic acid is an old-fashioned

remedy made from an infusion of oak-tree leaves. Formerly used in bleeding from the throat, today it is extensively prescribed as an astringent gargle.

Jaborandi leaves,[7] collected in the Amazon Valley, first attracted the attention of explorers by their use in the hands of natives as a remedy for snake-bite.

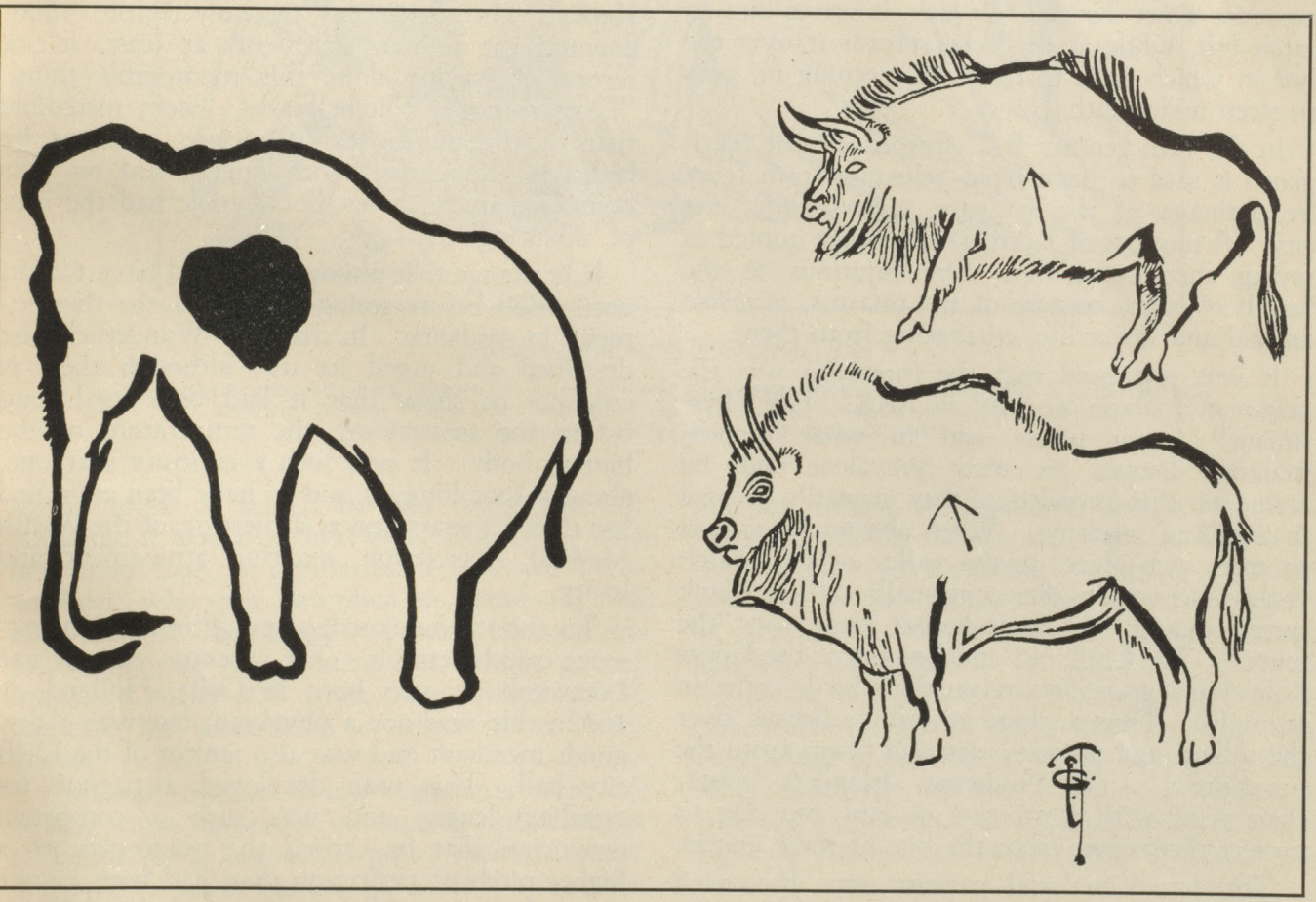
The Kola nut is made use of by the African natives, who attribute to it wonderful medical properties. For instance, the nuts are taken for their stimulant and stomachic properties. The Africans[8] chew them, much as the Brazilians do coca, and ascribe to them marvelous results. These are found to be almost wholly due to caffein, which is present in the proportion of about two per cent.

Strophanthus,[9] a drug now widely recommended for heart trouble, was first brought to the notice of explorers of equatorial Africa as a deadly arrow poison, so deadly as to paralyze the heart by means of the smallest wounds.

Although the above drugs are employed in the modern treatment of disease, their discovery can not be claimed by medical men.

The use of light as a curative agent, too, is said to have been discovered by accident and by laymen. Late in the last century it was observed that workmen afflicted with rheumatism were helped by remaining in the vicinity of an intense arc-light. Subsequently also in works employing electric soldering, in which there is a diffusion of light, it was noticed that workmen ceased to be affected by such diseases as rheumatism and gout.

In a great empire[10] no question is of more importance than the study of malaria. When we speak of one of our possessions as "unhealthy", it is in terms of malaria that we judge it. Malaria derives its name from "mal aria", or bad air, which is a reminder of the obsolete theory that the illness was due to exposure to the miasmas and mists of swamps. "Of all the diseases in our tropical possessions," said Dr. Willoughby Gardner in an interesting address to the British Medical Association, "by far the most important is



PALEOLITHIC AND MAGDALENIAN BOWMEN KNEW WHERE TO FIND THEIR VICTIMS' HEARTS

inger, in "The Evolution of Anatomy" uses these illustrations. The Paleolithic drawing of an elephant is from the Cavern of Pindal, Asturias, Spain; and the Magdalenian drawings of bison, with arrows embedded in the heart, are from the Cavern of Niaux, on the Ariège, South France.

malaria. It undermines the health of millions, and makes vast regions, which would be otherwise our richest possessions, almost uninhabitable." In India alone, it kills some five million people every year—twice as many as cholera, smallpox, plague, and other infectious diseases put together. Indeed, one is almost tempted to agree with a writer in the *Quarterly* who says of the malaria germ "that it has played a greater part in human affairs than the greatest politician or general that ever lived." The first step in dealing with it was the discovery by the Romans, in the dawn of sanitation, that marshes and deficient drainage had much to do with its origin.

Herodotus writes (Chapters 95-6) that the contrivances which the Egyptians use against gnats, wherewith the country (Egyptian marshlands) swarmed, are the following: In the parts of Egypt above the marshes the inhabitants pass the night on lofty towers, which are of great service, as the gnats are unable to fly to any great height on account of the winds. In the marsh country, where there are no towers, each man possesses a net instead. By day, it serves him to catch fish, while at night he spreads it over the bed in which he is to rest and, creeping in, goes to sleep underneath.

In the fifth century B.C. Empedocles of Agrigento is said to have freed Selinante from fever by drainage of the stagnant waters about the city. A number of Roman writers are quoted as saying that marshlands were injurious to the health of man, because of the miasms, invisible animal and insect life, emanating from them.

It was suggested that the mosquito was the origin of malaria as early as 1618. The Abyssinians[11] know where and in what months malarial diseases are most prevalent and, by acting on this knowledge, they generally succeed in avoiding infection. When absolutely obliged to cross such places as the valley of the Mareb in the fever season, they continually explode blank cartridges and light damp fires to keep away "the fever." The Chillooks and Bongos of the Upper Nile make great fires when their herds come in at night. Thus a cloud of smoke hovers over the village and protects men and beasts from the mosquitoes. The Andaman Islanders plaster their skins with a mixture of lard and clay to protect themselves from the bite of these insects.

The actual malarial parasite was discovered by Alphonse Laveran in Algiers in 1880. Sir Patrick Manson suggested the mosquito as the intermediate host who conveyed the parasite to man, and this was finally proven by the devoted work of the late Sir Ronald Ross. It is impossible to estimate the benefit that this discovery has conferred upon mankind. The subjugation of such a dread and fatal disease has made possible the full development of tropical countries; it has reduced the death-rate of such places as the West Coast of Africa to that of London; and it has made possible the construction of such gigantic works as the Panama Canal. The scientific proof of the relation between the mosquito and malaria is recent, but the natives of malarial districts suspected it long ago and protected themselves accordingly.

The *Quarterly Review* of July 1899, says that the prohibition of pork among the Israelites and Mohammedans likely arose from the danger of ingesting the *Tænia solium* and *Trichina spiralis* (varieties of pork worm), and the general use of hot drinks, like tea in China, was probably based on the knowledge of the ill effects that may result from the use of polluted water.

S. Weir Mitchell[12] says that it was the astronomer Galileo who gave us the first rude thermometer, and it seems to have been another, Herman Kepler, who first, and certainly before 1600, counted the human pulse, or, at least, left a record of having done this memorable thing. "Does it not", Mitchell asks, "seem incredible that of the numberless physicians who sat by bedsides, thoughtful, with fingers laid on that bounding artery, none should have had the idea of counting it?"

It is strange that physicians should have waited until 1858 before seeing the use of the thermometer in medicine. In that year Wunderlich first described and urged its use, although there is evidence to show that it had been used long before for ascertaining the temperature of the human body. It was such a curiosity that one, about a foot long, is said to have been exhibited less than 75 years ago at a meeting of the British Medical Association, exciting amusement and levity.

To the modern medical practitioner, a microscope is indispensible. The inventor, Antony van Leeuwenhoek, was born in Delft, Holland, in 1632. He was not a physician, but was a dry-goods merchant and was also janitor of the Delft city hall. This man developed a passion for grinding lenses, and was such a competent technician that he carried the microscope to a higher pitch of perfection than had been known up to that time. Previously, crude hand lenses, magnifying 20 to 30 times had been in use. It is said that in the cabinets that lined his study were nearly 250 microscopes and hundreds of



JENNER APPLYING VACCINATION

This caricature, by Gillray, shows Dr. Jenner at work, and a contemporary has stated that it presents an excellent likeness. There is a Dickens-like quality in the drawing of the work-house lad, who has been pressed into service as the great doctor's assistant.

lenses, most of which he had made himself. Although it was a medical man, Malpighii, who first discovered the capillaries, it was van Leeuwenhoek who first described in detail the red corpuscles of the blood. Peering through his microscope, he saw innumerable minute germs, magnified nearly 300 times, but not once did he mention the association of these germs with disease.

Although minute living organisms were for a long time suspected of causing infection, it remained for a layman to prove their existence. We owe to Louis Pasteur (1822-95), more than to any other, the discovery of the microbic origin of contagious diseases—and Pasteur was not a medical man, not even a physiologist; he was simply an excellent chemist. By his researches into the origin of silk-worm disease, of splenic fever and chicken cholera, etc., he laid the foundations of preventive medicine, a branch of science which is, beyond question, the greatest benefactor of civilization. He also discovered the infective nature of hydrophobia, for which he developed the method of preventive and curative inoculation with emulsion of the spinal cord of infected dogs which is used to-day. His name is perhaps more familiarly known from his method of arresting fermentation in milk and other nutritive fluids by partial heat sterilization or Pasteurization.

It is known that inoculation with smallpox virus has been practised by the Burmese from time immemorial. Among them, smallpox was called the inevitable disease, because of their idea

that it is rooted in the human body from the time of birth. The usual procedure in inoculation is to mix the virus with milk and insert it under the skin of the arm.

There is evidence to be found in the records of the most ancient times that smallpox was purposely inoculated as a prophylactic measure in Hindoostan and China. Immerman[13] states that for an indeterminate period of time it has been known that vaccinia (cowpox) could easily be transmitted to the human individual.

Edward Jenner, a Gloucester physician (1749-1823), noticed in his country practice that dairymaids who contracted cowpox from the udders of infected cattle were apparently immune to smallpox, a disease at that time very widespread. He concluded that the diseases were identical, but that the bovine variety was mild and inoffensive.

Jenner is to-day considered the originator of the prevention of smallpox by the use of cowpox vaccine, because he was the first to publish his results after vaccinating a number of persons. His work and its proofs were well received and developed both in America and Germany, so that in a few years 6,000 people had been vaccinated. This great experiment in preventive inoculation rapidly rid the world of one of its greatest scourges and one of its most offensive diseases. Great though the honour we owe to Jenner for his enlightenment to the world, we must give credit to Benjamin Jesty, a layman, who was probably the first person in Europe to inoculate with bovine virus for prophylactic purposes. This was done 22 years before Jenner commenced his vaccinations.

"Jesty was born at Yetminster in Dorset, and was a farmer who moved to the farm of Downshay in the Isle of Purbeck, near Swanage, in Dorsetshire. He appears to have been an eccentric man, full of quaint actions and speech, but with good power of observation and of sensible reflection on what he had observed. In 1774 smallpox was prevalent in his locality. He was thought to be in no danger of it himself, as he had already acquired cowpox, which he had contracted accidentally from the cows. Some of his family were not so protected, and the fact that two of his maidservants who had previously had the disorder from the cows, attended patients suffering from smallpox without infection, seems to have determined Jesty to inoculate the cowpox into his own family as a preventive against smallpox. Accordingly, Jesty carried out his ideas and inoculated his wife and two sons, aged two and three years, with the cowpox. The patients went into the fields and the virus was taken on the spot from the teats of the cows. A stocking-needle was the instrument used, Mrs. Jesty being inoculated under the elbow, the sons above. The latter had the disorder in a favourable way, but in the course of a week Mrs. Jesty's arm was much inflamed. She had fever and was so ill that a neighbouring surgeon, Mr. Trowbridge, of Cerne, was called. He said: 'You have done a bold thing, but I will get you through it if I can.' She soon recovered perfectly, but the boldness and novelty of the attempt produced no slight alarm in the family and no small sensation in the neighbourhood. Fifteen years later, in 1789, the sons were inoculated for the smallpox by Mr. Trowbridge, along with others who had not had the cowpox. The arms of the Jestys inflamed, but the inflammation soon subsided, and no fever or other variolous (smallpox) symptoms were observed, while the unprotected individuals went through the usual course of inoculated smallpox. Subsequently Mrs. Jesty and her sons were often exposed to smallpox without taking it, while in 1805 one of the sons was again inoculated with a negative result. In 1805 the Jennerian Society persuaded Jesty to come to London for five days for the purpose 'of taking your portrait as the earliest inoculator for cowpox, at the expense of the institution; you will receive fifteen guineas for your expenses.' He came and his portrait was duly taken, but he conceived a very unfavourable opinion of the metropolis, though he admitted it possessed one great merit, namely, that he could be shaved every day. He died April 16, 1816, at the age of 79, and he is buried in the little village churchyard at Worth Maetravers." [14]

From the above description and due to the fact that Jenner waited 25 or 30 years after the dairy folk had found the truth, and nearly as long after Jesty vaccinated his family, the honour of being the discoverer of vaccination must be given to Benjamin Jesty, the farmer of Dorsetshire.

The eye is the most important of all the organs of sense, and blindness the greatest of afflictions. In the history of medicine, ophthalmology was one of the earliest subjects to command professional opinion. The early gleanings of medical lore, in large part, relate to the eye. The greatest discovery in this specialty is held to be the ophthalmoscope. Before its invention by Helmholtz, a physicist and a non-medical man, Babbage, devised an instrument "for the purpose of looking into the interior of the eye," and even Helmholtz said of himself that it was not inclination but external circumstances that forced him to become, temporarily, a physician.

Spectacles, both convex and concave, were in common use by the Chinese before the opening of commerce with Europe. They were made of a transparent stone, of a colour like that of a strong infusion of tea, called scha-chi (tea-stone), and were tied on the head by silken cords. The common use of some form of magnifying glass by the ancients is well proved by their perfect workmanship, as displayed in the engraving of gems; and a crystal wrought in the form of a convex lens has been discovered in the ruins of Nineveh. Bifocal lenses were devised by a laymen, Benjamin Franklin.

In the field of obstetrics, the first successful caesarian section on record was performed by a layman, although the name is thought to imply that Julius Caesar was born in this manner. By this operation, which is usually indicated for a constitutional reason, or bony abnormality on the part of the mother, the child is removed through an incision in the abdomen. The following excerpt is taken from Baas:[15] "The first caesarian section on the living and parturient woman was practised by the sow-gelder, Jacob Nufer, of Siegershausen, in Thurgau, on his own wife, about the year 1500. After 13 midwives and several lithotomists had endeavoured in vain to relieve her, her husband, having invoked the assistance of God and obtained the special permission of the governor of Freuenfeld, operated "just as on a sow" with such good fortune that the mother survived to the age of 77, and was able subsequently to bear several children—and even twins—in the usual way. Undoubtedly, therefore, the operation was unnecessary, and the same was true of many of the operations which soon followed; for caesarian section became the fashion for a short time.

As to anaesthesia, Dioscorides[16] tells of a draught that may be given to human beings, before they undergo the pain of the surgeon's knife or cautery. Later, Pliny gives the formula of this draught, which was reputed not only to annul pain but to produce a death-like sleep. Dioscorides further says, "a wine is prepared from the bark of the mandragora root, and three cyathi (a little more than four ounces) of this is given to those who require to be cut or cauterized, when, being thrown into deep sleep, they do not feel any pain." Pliny[17] remarks that the juice of the leaves of the mandragora is more powerful than the root. Of such a preparation, he says the dose is six drachms (three-fourths of an ounce), to be taken before cuttings or puncturings. Speaking on the same subject, Apuleius says that if anyone is to have a limb mutilated, burnt, or sawn, he may drink a half ounce of the preparation, with wine, and while he sleeps the member may be cut off without pain or sense. An editorial in *American Medicine*, April 19, 1902, says: "From the fact that ancient anatomists referred to the carotid artery as *arteria soporifera* and that the Russians still call it *sonnaia* (the artery of sleep), it appears that it has long been known that, by compression of the carotids, a state of anaesthesia may be produced. It is not surprising, therefore, to find that among the natives of Java, Madura, and Banku, a procedure for obtaining narcosis is in extensive use under the name of *tarik urat-tidor*, or compression of the soporific vessels. The anaesthetizer sits in front of the patient, grasps the patient's neck with the fingers, the thumbs placed back of and a little below the angle of the lower jaw, and compresses the internal carotid artery against the spinal column. Complete loss of sensibility and of consciousness is produced." L. Steiner,[18] of Saerabaya, Java, points out the absolute harmlessness of the method and the rapidity with which sleep may be obtained, and urges that it be given a place in surgery. It must be remembered that ether and chloroform as anaesthetics are comparatively recent discoveries. Ether was first introduced in 1846 by an American, William Morton; and chloroform a year later in Scotland by James Simpson.

A paper such as this would not be complete without reference to the laryngoscope, a reflecting mirror for examining the larynx. It is one of the best illustrations of a great medical discovery made by a non-medical man. The inventor of this instrument was a singing master of London, Señor Manuel de Garcia, who died just 30 years ago at the age of 100. While watching some children at play with mirrors in the sunlight one day, the idea suddenly came to him of using two reflecting mirrors for examining the interior of the larynx. In 1855 he presented a paper to the Royal Society of London and briefly explained his device.

Garcia's invention was treated by the English with apathy and even incredulity. His paper, however, fell into the hands of two medical men who soon realized its possibilities. Türck of Vienna at first failed with the device, but later, Czermak converted it from a "physiologic toy" into an instrument of scientific research and popularized its use by demonstrations on his own throat in Vienna, London, and elsewhere. To Garcia the laryngoscope was merely an incidental contrivance for those who desired to see the

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Age and the Emotions

By KATHARINE M. BANHAM BRIDGES

(Assistant Professor of Psychology, McGill University)

IN recent years, the Medical Faculty at McGill have been turning their attention more and more to the intricate problem of the human nervous system and its function, both in health and disease. The mind and the body work together, and in knowing something about the mechanism of the one we can better understand the other. Psychology has come to be an essential study in medical training. Facilities for research have been opened up in neurology and psychiatry at the hospitals and the Mental Hygiene Institute, and in psychology at the former McGill Nursery School and the Montreal Foundling Hospital. Further provision for research will be available in the proposed Neurological Institute.

While Doctors Beattie, Brow, and Long were making important discoveries with regard to the centres for emotional activity in the basal ganglia of the brain, the writer was studying the progressive development of emotional behaviour in young children. Several interesting facts were observed, and new theories concerning human emotions suggested themselves in the course of this investigation.

It seems reasonably clear that emotions are not merely inborn, primitive forms of behaviour into which we lapse during our "off moments," but they grow with us, and there are emotional reactions characteristic of different ages. The grown-up business man no longer cries, kicks, and struggles vigorously when the bed-clothes hold his arms down too tightly, though he might have done so when he was three or four months old. The nine-year-old boy does not tighten his lips and curse when the price of a certain stock goes down, but the speculator may do so. Different disturbing or exciting situations arouse the emotions at successive ages. And different kinds of behaviour are expressive of the same emotion at subsequent age-levels. The frightened baby lies stiff and motionless where it falls, the terrified little boy screams and runs, while the adult, trembling and breathless, tries to find some quick and sensible way out of a fearful calamity.

It is true that no two individuals behave alike in the same situation, not even the babies in the Foundling Hospital who are brought up together under the same conditions. Emotional behaviour and the accompanying inner experiences depend to some extent on the physical constitution, state of health, and responsiveness in the nervous system. One child will shriek with temper when his bottle slips out of his mouth, while another of the same age will lie passively watching the shadows on the ceiling till some fairy-godmother replaces the nipple in his mouth. But in spite of these very noticeable individual differences, continuous study of the emotional behaviour of babies and small children points to the fact that at successive age-levels the majority of children show similar emotional reactions.

This can be explained largely on the ground that most infants go through the same sort of daily routine and make similar environmental contacts. They all have to be fed, washed, and put to bed. They are nursed and talked to by devoted parents and nurses, they bang their heads, trap their fingers, and have to give up some cherished plaything when time comes for rest. In addition the muscles mature and the senses become more acute, according to laws of physical development common to mankind. Later on, the youngsters go to school, work together and play together. Thus it is that despite their constitutional idiosyncracies, children for the most part go through the same stages in emotional development, just as they develop in skillfulness and intelligence.

More important than the fact that emotional expression changes progressively with age and that new situations come to arouse emotion, is the discovery that the emotions themselves only evolve slowly in the course of development. The new-born baby experiences neither disgust, nor sorrow, nor elation. In him there are no subtle emotional distinctions. He only knows degrees of agitation or excitement, and the rest is just peaceful tranquility.

The first emotion in life, then, is agitated excitement, a general disturbance, expressed in crude, disorganized movement, quickened breathing, and cries. Almost any sudden or intensely stimulating situation will arouse this emotion: sun shining in the eyes, loud noises, pangs of hunger, or the pressure of the nipple in the mouth. Within a week or two a definite emotion of



AGE AND THE EMOTIONS: THE INFANT STAGE

These photographs strikingly illustrate several phases of emotional development. From left to right they show: Eleven months—Delight in being fed and receiving attention; Fourteen months—Distress and anger at delay in feeding; Thirteen months—Fear of a stranger who is standing near.

distress makes its appearance. This is different from general excitement. There is less pleasure in it, and the provoking situation is always something disagreeable. The baby utters a high-pitched cry, breathes rapidly and audibly, shuts its eyes tight, and is much more tense and jerky in its movements. Still later, between two and three months of age, the infant shows signs of delight. Faint smiles appear, the eyes and mouth are held open but the facial muscles are not strained. This is a response to satisfying experiences such as being fed, nursed, stroked, or rocked.

Between three and four months of age a baby begins to show real anger when his desires are thwarted or go unsatisfied. Mother standing by the crib now reminds him of the pleasant experience of being fed or nursed. He begins to feel hungry, his back and arm muscles set in preliminary adjustment ready to be picked up. He smiles with satisfaction. But suppose mother just watches without picking him up. Then the tension of the unsatisfied drive expresses itself in loud angry cries, vigorous legthrusts, and jerky arm movements; the eyes moisten with tears and the face becomes flushed. This form of expression of anger continues for some months. Distress and anger are both illustrated in the accompanying snapshot of a fourteen-month-old Foundling Hospital baby who was enraged at delay in feeding.

A five-month-old baby will splutter, cough, and choke with disgust over some unpalatable food, while at three months he would only turn his head indifferently or let the offending liquid run out of his mouth. Not until he is two or three years old does he become disgusted at unsightly messes. By seven months of age a child has sufficient discrimination between the strange and the familiar, the anticipated and the unexpected, to show distinct fear. At the approach of a stranger, he becomes motionless and silent, stares wide-eyed at the visitor, then turns away his head as if by so doing he would remove the disturbing object.

At about seven or eight months the child takes special delight in self-imposed tasks, in reaching after a dangling rattle. He expresses the supreme joy of elation at his own achievement in attaining the object, by grunts and puffs, ecstatic jumping up and down, and banging movements. A little later the infant becomes really affectionate with the adults who tend and nurse him. He smiles, pats, and strokes them gently in response to their caresses. Previously he only showed a general sort of delight in personal attention, just the same as he expressed on hearing the rustle of paper or when watching sun-beams dancing on the wall.

A few months later the infant not only shows reciprocal affection but spontaneous affection, at first for his nurses and then for his play-mates. By the time a child reaches four or five years of age he experiences that delightful satisfaction of cherishing someone younger and less capable than himself. He seeks out a smaller child and ministers gently to its needs, holds hands, embraces, and instructs in little routine matters. Here is the beginning of parental affection. It may be observed in children of both sexes, though in the McGill Nursery School the behaviour of the girls was rather more dominated by this motive than that of the boys.

As years go by, more subtle emotional reactions evolve and finer shades of feeling are experienced. No two people ever develop quite the same set of

emotions, because their physical constitutions and their experiences in life are different in many respects. Not everybody goes through a railway accident, discovers the North Pole, or has an operation for gall-stones. We can never quite understand one another's feelings or emotional reactions, because we have not quite the same imagination or fund of experience to draw from.

Some few people, in all probability, have emotions that the majority of us know nothing about. And yet, as in the case of the children we all have many of life's experiences in common. We have to go to work with a headache, pay the grocery bill, wash dishes—and who among us does not know the rapture of an evening on a lake, watched over by the cool, white moon and lulled by the lapping sound of the water. And so there are emotions, with familiar names like joy, anxiety, affection, and grief, well known to us all.

One great benefit which may be obtained from an age-scale of emotional behaviour, such as the writer is constructing at the present time, is that it should help us to distinguish between normal and abnormal reactions at an early age. We may discover which emotions are unusually strong in a child and which unusually weak. Then we can arrange environmental conditions to temper undesirable emotions and draw out the beneficial ones. In this way a few psychopathic personalities may be arrested in their inception.

Another value of this developmental study has already made itself apparent. It is, for instance, a great relief to many to know that certain forms of emotional expression are thoroughly normal at a given age, and are common to nearly everybody. When the harassed parent complains of the obstinacy and appalling temper of her two-year-old son, we can at least give her the satisfaction of knowing there is nothing portentously odd about the child. He is probably a vigorous, healthy youngster, perhaps a little over-stimulated; but in any case he will most likely have grown out of his contrariness in less than a year's time.

Of course, it will be readily observed that emotional behaviour does not always and consistently fit into an age-grading such as this sketchy article might lead one to suppose. Even the highly trained politician might "forget his manners" for once to the extent of hitting-out at an adversary. Both adults and children have their moments of weakness and resort at times to an earlier form of reaction. This usually occurs when the health is impaired or the nervous system exhausted from strain and fatigue. On the other hand there are among us those who are precocious in their emotional development. But these observations do not alter the fact that, by and large, there is an emotional behaviour characteristic of each age-level.

One often hears among students the admonition "Be your age, man!" or in other words "Don't behave so childishly!" This may be sound advice, in the light of recent psychological research. For, the expression may be taken to imply largely "be your emotional age" and show the poise, fortitude, feelingful discrimination, and appropriateness of behaviour ordinarily exhibited by men of your years.



AGE AND THE EMOTIONS: THE STAGE OF CHILDHOOD

From left to right: Three years—Elation, "I was ready first;" Four years—Distress and anger at being hit by another child; Five years—Parental affection, delight in taking charge of a younger child.



LOUISBOURG: RUINS OF THE CITADEL AND NORTH CASEMATE, 1932.

The Importance of Louisbourg's public buildings becomes clearer as excavation under the direction of the Dominion Historic Sites and Monuments Board proceeds. Many visitors now inspect the ruins each year.

Louisbourg: Some Past Alarums and Recent Discoveries

By THE HON. J. S. McLENNAN, Arts '74, LL.D. '23
(Senator of Canada)

(With illustrations presented through the courtesy of The Commissioner, National Parks of Canada)

WALPOLE'S saying that every Gazette brought news of a victory applied to the years 1758-1760, but 1745-1747 were stirring times, too. Prince Charles Edward's career in Scotland from Glenfinnan in August, 1745, back to Glenfinnan in September, 1746; Marshal Saxe's victory at Fontenoy; the capture of Louisbourg in 1745 by British colonial forces; that of Madras in 1747 by the French; the reverberations of Anson's circumnavigation of the world, in which success was won by "indomitable perseverance, unshaken firmness and infinite resource," made a period in which it seemed the world might be reconstituted. So varied were the causes at work, and so complex the interdependence of forces and aims, that it seems amazing that, except for new resentments, the Peace of Aix la Chapelle simply restored the conditions that had existed before.

The French Government of that day was harassed by the many calls on its military resources. Its naval power was inadequate to protect the far-flung colonial empire won by the energy of its explorers; and its brilliant administrators were left with inadequate material to make their projects effective.

But the capture of Louisbourg, its sole port on the western seaboard of the Atlantic, by the militia of the British colonies, its neighbours and rivals, could not be passed over as an affair of outposts. Possession of the port by the British, already holding Newfoundland, flung open the gateway to the St. Lawrence, for the Strait of

Belle Isle was not used at this time. French retention of Canada was dependent on repossession of Louisbourg; and the prestige of France demanded a counter-blow of greater force than its capture, which had brought a new element into the balance of international affairs—namely the colonist armed not only for defence but for aggression.

The counter-stroke determined upon by the French was the despatch of an expedition to recapture Louisbourg, to regain possession of Acadia by taking Annapolis Royal, and to capture and burn Boston, and ravage the coasts of New England. For these ambitious purposes there were set apart ten ships of the line, frigates, bomb vessels, and some sixty transports to carry 3,600 regular troops. These forces were to be strengthened by four capital ships from the West Indies, which were to join them at Chebucto (Halifax). Although England was preparing to attack Quebec from its new point of vantage at Louisbourg, with a force made up of ships, regular troops, and colonial militia men, supplemented by a land attack, and although time was of the utmost importance, want of money and administrative red tape in France delayed the sailing of the French until about a year after the loss of Louisbourg. The flotilla finally left from the roadstead of Aix on the 22nd of June, 1746, and its relatively important forces were to be met at Halifax by de Ramesay with a considerable number of troops and Indians.

The command was given to the Duc d'Anville, a member of the great family of de la Rochefoucauld, and destined through this connection to hold high office. Born in 1709, he became in 1720 by succession to his father, Lieut-General of the Galleys. In anticipation of his taking command of this expedition, he was made Lieut.-General of the Armies of the King in January, 1745, after service almost exclusively in the Mediterranean. It may not be unkind to say that he probably inherited more capacity as a naval officer from being the grandson of Du Casse than he gained from actual service afloat, if that service was all in the Galleys.

He had among his officers d'Estourmelles in command of the *Trident*, an officer of long service but apparently with little to distinguish his career. Kersaint, familiar with North American waters and an able and energetic seaman, was on the *Renommée*, and La Jonquière, later Governor of Canada, commanded the *Northumberland*. This ship, within a few months of her launching, had been captured in May, 1744, by de Conflans. In passing, one may note that she still flew the French flag in 1777. De Conflans, one of the brilliant officers of that generation, was ordered to join d'Anville on his arrival in Acadia; while among the junior officers were the Chevalier de Mirabeau—as energetic and free-spoken as his brother, the "Friend of Man"—La Motte, Piquet, and, most distinguished of them all in later years, Suffren, then a midshipman on the *Trident*. These are the outstanding figures of the fleet.

The news of these preparations soon became known in England and in her colonies, where at the time, as has been noted, projects were under way to take advantage of the strategic importance of the possession of Louisbourg. A fleet was to be sent against Quebec; and Shirley was the prime mover in arranging for a militia force to make a land attack on Canada.

The fleet was not sent out and the Colonial forces were finally disbanded, although an expedition against Crown Point was only recalled when the news of d'Anville's expedition reached Boston. Boston was placed in a posture of defence; some eight thousand country men gathered to defend the Colony; Connecticut promised six thousand. New England felt the same dismay when this news was spread abroad as had Old England when the Spanish Armada approached her shores. After an interval of close on two centuries, the spirit of the Elizabethans was displayed by the colonists who prepared for vigorous defence.

Quebec, too, fearing for its safety, prepared for early tidings of an enemy fleet, distributed arms and munitions, equipped fire-ships, and, like the British Americans, made ready to withstand any enemy which might appear. As to Louisbourg, Knowles, its commander at the time, wrote on November 8th, 1746, that "had the French fleet appeared before August, they might have succeeded, as there were but five or six guns mounted to the land and the breach not repaired; at present there is upwards of thirty, and the place stronger than it had ever been."

It is hard for a generation which knows that news has been transmitted from England to the Antipodes in a few seconds to picture the delays, the discords, of an age dependent on sail and actual contact for co-ordination. The season of 1746 was one of alarums and excursions. D'Anville slowly made ready to carry out the plans of Maurepas; Lestock in an English port prepared with equal slowness to carry out those of Newcastle; New England, busy with a plan of attack on Quebec, changed to preparations for defence; de Conflans failed to make his junction

with D'Anville; and de Ramesay was foiled in giving aid to the main expedition by causes he was impotent to modify.

As has been mentioned, the force under d'Anville sailed under sealed orders on the 22nd of June. When he told their destination to his officers, it caused discontent. There followed the usual difficulties of a flotilla separating on account of differences in speed and handling. The Bay of Biscay took its toll of masts, spars, and sails. Time was lost at the Azores; so that it was only on the 15th of September that the expedition neared the coasts of Acadia, after having several ships damaged through lightning strokes and consequent explosions. Off Acadia there came a terrible hurricane, which dispersed the flotilla, driving two frigates so far towards mid-Atlantic that they returned to France, where they landed what remained of their starving crews and the regular troops, after 114 days at sea.

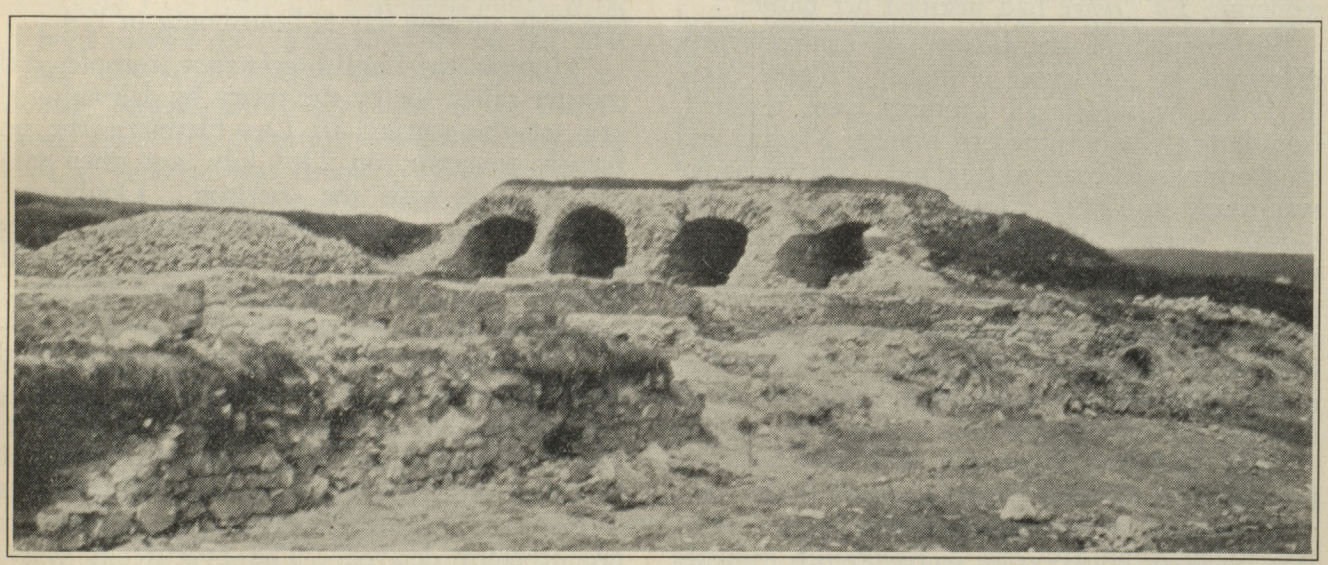
Scurvy was the scourge of the crews of all ships on deep sea voyages in these times. One may recall that the *Dublin*, which brought Amherst to command the Louisbourg expedition of 1758, met the fleet leaving Halifax but was not able to continue with it on account of the sickness of her crew. The ravages of this disease were great in a fleet so long at sea as d'Anville's, and its mortality was increased by plague, so that when d'Anville reached Chebucto on September 23rd and his fleet crawled in after him, everything combined to make that fleet and its personnel ineffective in men, material, and morale.

So preyed upon by these disasters was d'Anville that he died of apoplexy on the 27th, on the afternoon of which day d'Estourmelles arrived with such ships as he had saved from the dangerous vicinity of Sable Island. D'Estourmelles, on whom the command devolved, presided at a council. He took the view that the only thing they could do was to return to France; but his officers were against him. He therefore retired to his cabin and fell upon his sword. La Jonquière succeeded him by seniority and by the wishes of the officers. He knew there was no support to be expected from Conflans, for that commander had touched Chebucto and, finding no one there, had sailed for France.

La Jonquière did his best to restore health to his men, finally landing them on shore; and, determined that the remainder of an expedition which had created such hopes in France, such anxiety on the coasts of the Western Ocean, should not return without some victory, gathered together his decimated forces, got them inadequately provisioned from the Acadians, and sailed to invest Annapolis Royal.

They were dispersed by a gale off Cape Sable. Two ships reached Annapolis Royal, found it protected by Spry and Rous in the *Chester* and *Shirley*, and, still pursued by storm and pestilence and famine, sailed for France, and reached Port Louis in Brittany on the 7th of December.

D'Anville's body was buried without ceremony on September 28th; indeed ceremony would have been an irony under the circumstances: men and officers were ravaged by disease and starving (for their provisions were at a low ebb), and two commanders were dead within the twenty-four



LOUISBOURG: THE NORTH CASEMATE AS IT IS TO-DAY

Louisbourg, founded in 1713, fell for the last time in 1758. Before its destruction, its public buildings were probably the most imposing then existing in North America.

hours when La Jonquière took over the grave responsibility of command.

La Jonquière, who deserved and received praise for bringing his ships home, was given high command; and in May, 1747, was taking out a fleet to Canada when on the 14th he fell in with the fleet of Anson. He ably detached his convoy of merchantmen which reached Quebec in safety, faced his enemy, and made a splendid fight before surrendering. He was later released and subsequently served as Governor of Canada. Before one assumes British superiority from this victory, it must be noted that Anson's fleet mounted 940 guns and La Jonquière's but 432.

There were in this period equally fine examples in subordinate officers of seamanship and fighting. Take one man as an example: A captain, the Chevalier de Saliès, sailed from Brest on the 13th September, 1746, reached Chebucto on October 25th, followed La Jonquière to Annapolis Royal, and found him gone. He then went to Port Maltois in Acadia to rest his men, remained there from the 8th to the 20th November, and then sailed to France with an enfeebled crew. About the Azores his frigate, *La Sirène* was dismantled in a gale and yet he was able to reach Brest on December 15th; a brilliant performance. He was given a larger vessel in La Jonquière's fleet of the next year. In *La Gloire*, a vessel of the 4th class mounting 46 guns with a full complement of about 320 men, he sustained the fire of three English ships, one of them Anson's flag-ship mounting 90 guns. De Saliès was killed early in the battle, but so well did his successors carry on their defence that their last cartridge had been fired and 175 dead lay on her deck, when in surrendering *La Gloire* had justified her name.

But enough of the history of ineffectiveness redeemed by incidental brilliancy! Peace came in 1748, by which all captures were restored. Louisbourg was returned to France; Madras and the Coromandel coast to England. The exchange was made in 1749. Hopson, Governor of Isle Royale, turned it over to Des Herbiers and retired with the English. Describing the events of this period, Mr. Justice Crowe, of Sydney, an erudite historian, President of the Cape Breton Historical Society and for many years member of the Historic Sites and Monuments Board of Canada, has written:

"On the 8th of September, 1749, we find Des Herbiers the Governor at Louisbourg, by that time returned to the French under the Treaty of Aix la Chapelle, reporting to the French minister in these words: 'I have the honour to inform you that in the course of the conversation which M. Prevost and myself had with the English Governor, we often spoke of the late Duc d'Anville and requested that the spot where he was buried should not be destroyed by the English in the works they were carrying on at Chebucto. He promised to write the General in charge in this part of the country and even to send his body to us, should the exact burial spot be found and if the remains were in a fit state to be transported; and this was accomplished. The vessel *le Grand Saint Esprit* brought the body here and he was given the military honours due to his rank and birth. I also gave him the same military honours when his body was landed. He is buried in the King's Chapel at the foot of the altar in the sanctuary, which chapel is being used as a parish church. M. Prevost did all possible to carry out a befitting funeral service. He arrived in the port and was inhumed on the 3rd September.'

"That Des Herbiers in all matters reported had the approval of the minister is evident from the following extract from a letter to the governor and his intendant, Prevost, dated 19th May, 1750: 'His Majesty also had approved of the reclamation which you have made of the body of the late M. le Duc d'Anville as well as of the honours you have rendered to him at the time of entombment in the King's Chapel at Louisbourg.' And on the same date the minister writes to Prevost, the intendant, who would have to do particularly with any expenditure in that connection: 'His Majesty had approved of such expenditures as you have made for the ceremonial burial which you have given to the body of M. le Duc d'Anville.'

"It ought not to be difficult to reconstruct the scene which occurred on what was probably a fine early autumn day in Louisbourg in 1749.

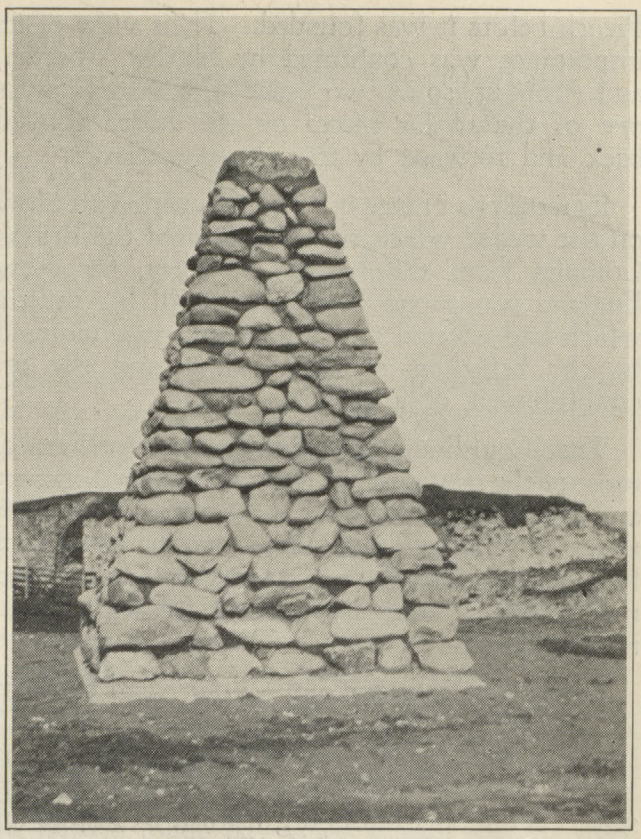
"Hopson, the English governor, completed the transfer called for by the treaty by delivering the keys of the fortress to Des Herbiers, the new French governor, on 23rd July, and then sailed for Halifax with the garrison. Doubtless it was with Hopson that Des Herbiers had discussed the reburial of d'Anville on French soil, and doubtless it was Hopson who had written to Cornwallis as Des Herbiers says, and doubtless all the preliminaries had been arranged to the perfect satisfaction of both parties.

"It would have been pleasing to read that it was an English vessel that conveyed the remains to Louisbourg. But the fact was the English were short of ships and the transfer to Louisbourg had been thereby delayed. The evacuation was to have been completed on the 12th July, but four of the five transports only reached the port on the 13th. Then there was a huge quantity of

military stores to be transported and had not the French vessels been loaned for the service there would have been further delay.

"It may well be said that *Le Grand Saint Esprit* was freighted with stores on her voyage to Halifax. In any event her mission was known and her return to Louisbourg would be anxiously expected. She arrived on 3rd September and was received with thundering salutes from the guns of L'Isle de L'Entrée—or as we now call it, Battery Island. After the ship had passed the port channel these salutes would be repeated from the Grand Battery. And as the ship approached her anchorage in front of the sea wall, more salutes would be fired from the Circular Battery, or rather from the Cavalier, for the English had not rebuilt the circular battery during their three years' occupation. All the troops of the garrison would be drawn up to receive the body when it came on shore. A suitable carriage for the transfer of the coffin was on hand, and accompanied by troops was slowly and reverently borne through the crowded streets to the King's Chapel in the Citadel which had been suitably draped for the ceremony. Here the solemn ritual of the church's burial service was performed and the mortal remains of the Duc d'Anville finally committed to French soil."

The unfortunate expedition of the Duc d'Anville has slumbered in history except for the many readers of Parkman's brilliant account of it in the second volume of his "Fifty Years of Conflict." Until the work of the Historic Sites and Monuments Board in restoration of Louisbourg had been directed to the probability of finding the coffin of the Duc d'Anville, very little exploration had been carried on. This summer on the 21st of June, lovers of Louisbourg were pleased to hear that beneath the High Altar of the King's Chapel, where the documents said the Duke was buried, a skeleton was found. Those interested in these explorations hoped to find something to identify the remains, some relics of the coffin or of the uniform of this commander. Of the coffin nothing remained except a small amount of wood in the last stages of decay and two knots; the winding sheet had entirely disappeared; and there were no traces of the metal of the uniform or of the sword, such as one would have expected to find had he been buried with them.
The skull had been sawn so that the brain would be exposed for a medical examination. That there might have been hurried interment in the thirty-six hours which included a death from apoplexy, a suicide, and the assumption of authority by the third commander-in-chief of an



LOUISBOURG: 1932

The cairn here shown marks the site of the King's Bastion. A tall shaft some distance away was erected by the Society of Colonial Wars.

expedition worn out by misfortune and ravaged by plague seems more than probable. The skeleton has remained where it was found and has been carefully and solidly protected.

Those who have been faithful lovers of Louisbourg, unfortunately too few, have rejoiced that in the last few years the Historic Sites and Monuments Board has been spending annually a certain amount of money on Louisbourg, with very gratifying results. There are various problems disclosed, but as the work progresses the documents about Louisbourg, which are full, have been verified.

The importance of Louisbourg's public buildings, perhaps the most imposing buildings then in North America, has been shown by the excavations; and difficult as is access to Louisbourg, the number of visitors who register (but a fraction of those who visit the ruins) increases year by year. Each building the foundations of which are cleared away adds interest and puts before the inquirer the outward and visible signs of the importance of Louisbourg during its existence.
Its short history illustrates the laws of commerce and of colonizing, understood by the

French before it was founded. Their view of its importance was confirmed by Shirley, Warren, and Amherst, so at two peace conferences it was one of the major pieces on the board moved back and forward by the plenipotentiaries.

Its return to France in 1748 was perhaps a blow on the wedge which slowly separated the British Colonies from the Mother Country, for New England was proud of the valour of her militia which had effected its capture, and was incensed by the belittling of that valour and the re-establishment of a rival she feared.

That Louisbourg protected Quebec for France, most of the strategists of the time believed, except an occasional devotee of sea power, to whom there seems a sufficient answer in the history of long voyages and in their effects on the ships and men, making necessary a place for shelter and refitting.

Louisbourg saw deeds of valour equal to those at Quebec. That brilliant sailor Voquelin fought there. The concentration there of the French forces in 1758 was a fine piece of seamanship. Wolfe at Louisbourg learned to inspire his men and, after failure at the St. Charles, repeated the operation by which at Kennington Cove his subalterns had shown him the way to victory.

Those who know the picturesque and appealing beauty of Louisbourg and those who know its history and its significance in the history of its time plead for the right treatment of its ruins. They do not plead for something which will draw the spending money of the tourist, but they are eager that, at the earliest time when circumstances are propitious, Canada as Canada will adequately and with knowledge care for the remains of a place where valour, industry, and capacity were displayed and so stimulate our citizens by a knowledge of the sacrifices that have built up our communities of today.

An Artist's Wanderings in Tunisia

(Continued from Page 26)

years later in Paris. It was at the inauguration of the buildings of the Overseas Forces at the Colonial Expedition. Inside the large Lecture Hall, hung with trophies and paintings, were gathered Marshal Lyautey, Archinard, the conqueror of the French Sudan, and other generals and distinguished colonial officers in their brilliant uniforms. They represented the great army of pathfinders and apostles of civilization, with whose work I had come into touch in Africa. Incidentally, by invitation of the government, sixty paintings by the writer covered an entire wall. Together with a Canadian student, he was one of the few foreigners present on this stirring occasion. Outside, by the great Tour de Bronze of the Army of France, were detachments of red-coloured Spahis, standing high in their stirrups with sabres uplifted to chin, trumpeters sounding the salute, and sections of native troops from Morocco to Indo-China. It was a colourful climax to the wanderings in Tunisia of an artist whose home is in the Dominion.

Discoveries in Medicine by Laymen

(Continued from Page 35)

apparatus which produced the sounds he was endeavouring to train into harmony. He little realized the usefulness of his instrument in the hands of the nose and throat surgeon who examines the larynx every day by this means.

All these instances, and more might easily be added, indicate how the knowledge of modern medicine has been helped by external influences. From time immemorial medical men have been striving to relieve humanity in its battle with disease, but we must not forget to give credit to the layman who in many cases has opened the way for the physician.

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The Importance of our Foreign Relations*

By THE HONOURABLE HERBERT MARLER, Law '98
(Canadian Minister to Japan)

LIKE every country, Canada has various national interests which require the attention and indeed the assistance of every Canadian—and among those interests are our foreign relations. Any who have visited our Capital City of Ottawa will have noticed engraved in the stone over the main entrance to our Houses of Parliament these words—

The wholesome sea is at her gates.
Her gates both East and West.

The casual observer will, no doubt, admire the beauty of this inscription—but I wonder if he sufficiently appreciates its importance, or entirely realizes the significance which the words imply. The words clearly and abundantly indicate that our destinies are not confined to our own territorial boundaries—but extend beyond them and over the wholesome seas which wash our shores both on the East and on the West. Those seas are the common highways to other lands—to the homes of the other nations of the world. Canada is therefore not, like some other countries, closed in from the seas by territories of other nations. We have neither on the East nor on the West to ask permission of any foreign power to cross its territory before we can communicate with the other nations of the world. We have free and unrestricted access to those nations. At the same time, let us remember that other nations have like access to Canada. This makes it essential that our outlook should be international, to say nothing of other reasons which are also apparent.

One of the other most apparent reasons why our outlook requires to be international—and it is one of the greatest importance—is on account of the financial and economic structure which we and our forefathers have raised within the boundaries of this Dominion. The nature and extent of that structure is known to you, but it is not improper to remind you that it includes many important parts, which together comprise the national life of Canada. It is no exaggeration to say that the structure referred to is actually the national life of Canada, for, when it progresses, we progress with it, and, if it died, we as a nation would die with it. That structure, as you are aware, includes millions of acres employed in the raising of grain and other agricultural products, mines producing great quantities of metals, factories which manufacture paper, lumber, and hundreds of other commodities, and an enormous system of railways, built to transport goods in Canada, and to seaboard for shipment to other lands. Now, this structure, and each of its parts, is intended to operate. Its agricultural acres are meant to produce wheat and other products, its mines metals, its mills manufactured goods, and its railways to transport goods and people. In short, it is intended to be a live structure—to throb with life. It is not meant to remain idle. If it does, it will become overgrown, or rust and die. But the only way this structure, or our national life, is able to live is by producing—and it can produce only if its products are sold—because products, to be of value, must be sold or exchanged for others. So long as they are in warehouses, they are little more than liabilities.

But, if we must sell so as to continue production, and hence keep our national structure alive, may I ask where are we to sell these products? We cannot sell them all in Canada, because, by reason of the immensity of our national structure and the gifts with which Providence has endowed us, we produce more than we can possibly consume. Hence we must sell the surplus production in other countries. Now, that is one of the most important connections between our national life and our foreign relations. We are forced—and that is none too strong a term to employ—and whether we like it or not—to have economic relations with other nations of the world, In crude terms, we need a share of their markets.

To some it may appear a simple thing to secure a share of the foreign markets of the world. Let me assure you it is far from simple. It is a very complex matter. A share is not obtained merely for the asking. There are others asking also. To obtain a share, it is essential to secure the confidence of those with whom we want to deal, and to make ourselves and our products known. No person can be expected to deal with

another who is not known—whose products he does not understand—and, in particular, unless he has confidence in him. These are most simple business axioms in Canada, and they equally apply in every part of the world. Hence our relations with foreign nations require to be studied, and our interests prosecuted among them. We are thus not alone in the world. We cannot proceed on the path of progress without realizing that there are on that path with us and around us other nations whose attitude towards us—whose requirements and demands—and whose successes or whose failures react directly on our own national life.

Canada is frequently spoken of as "A young country." In my opinion our youth is over-emphasized. We are really not a young country, nor are we wanting in experience. Have we not out of diverse elements solved the problem of self-government? Have we not welded together a great empire, stretching from the Atlantic to the Pacific, into one united nation? Have we not, though small in population, achieved a position as the fifth trading nation of the whole world? Few nations who are called "old" are able to say as much. If we ponder over all this, we should realize that we are not young, but an experienced nation, quite capable of conducting our own affairs in foreign lands and, indeed, being obliged to do so, if we are to preserve our prestige and national structure. It is appreciating all this and recognizing the importance of our foreign relations, economic and otherwise, and for the purpose of conducting them and prosecuting our interests abroad, that our Government has created our foreign services.

Our foreign services are conducted by means of representatives sent out from Canada to various parts of the world. Leaving aside for the moment our representatives in other parts of the British Commonwealth and Empire, our representative in a foreign country may be a Minister or a Trade-Commissioner. A Minister is an officer engaged in the conduct of both political and economic matters and as such represents his Sovereign. A Trade-Commissioner is an officer mainly engaged in commercial matters, but reports on political matters also. You will therefore observe that our foreign services deal with both political and economic questions. Both, to us, are of the greatest importance.

Political questions abroad are of importance to us, both in respect to the internal political affairs as well as those which are external of a foreign state, because they have a direct bearing on the position of that state in respect to Canada. Internal political affairs, for example, embrace such matters as the raising or lowering of tariffs, preferences given to other countries, import or export restrictions, financial matters, immigration, passports, and a great number of others. In respect to these, the interests of Canada require constant watching. The external political affairs of a foreign state embrace among others, but in particular, the friendly relations between it and other countries. This again is of great interest to Canada because friendly relations promote and assist trade, while unfriendly relations prevent and restrict it. An extreme case in point is the boycott invoked against a supposedly unfriendly power.

It will thus be observed without further explanation that political matters are closely related to commercial matters. Hence, while the interests of Canada abroad are in the main commercial, it is impossible, if our economic progress is to advance as we want to see it advance, to disregard in any way the progress of political matters in a foreign state. But, in addition to the conduct and study of political matters abroad, your foreign services—certainly those in the Orient—are constantly examining into commercial matters with the object in those great areas of promoting Canadian trade.

The study and the conducting of the affairs, political and economic, of one country in another is a complex matter. This study and conducting have been given various names. Perhaps the most convenient and the best known term to describe them is "the science of diplomacy," and, while that science is not simple, it is not one which in any way is beyond the ability of Canadians completely to understand. Indeed, it may be said, with every respect to others, that the people of Canada must understand their own affairs abroad if they are to be conducted with full knowledge as to their particular interests. But by this is not meant lack of co-operation with others—nor should there ever be other than the closest association and understanding with officers from other parts of the British Commonwealth and Empire, so that the interests of our King shall always be served in the best manner possible.

But, while, as I have stated, the supervision of our foreign relations by Canadians is desirable, we should not lose sight of the qualities which are essential to officers to whom such conducting is confided. While book-learning is an excellent and necessary basis to all studies, it alone is not sufficient equipment for a foreign agent. The successful foreign officer to be of value—or even not to be an embarrassment to his country, and

whether he be a minister, a secretary, or a trade-commissioner—is constantly called upon to exercise qualities which can come only from the character and bearing of the man himself. His character must embrace patience, politeness, denial of self-interest, loyalty to his superiors, and consideration for the feelings and aspirations of all with whom he makes contact. He must not only possess scholarly attainments. He must be a kindly and considerate gentleman also. He must not be a machine—even one endowed with splendid mental powers and equipment. He must be and act as a human being also. He cannot consult his brain alone. He must consult his heart also in every one of his dealings. He must be sincere in all he does so that, whether he represents his Sovereign, or a department of government in a major or minor capacity, his word and his intentions will never be doubted for a moment by those with whom he deals. Such, at least in my opinion, are the qualities with which officers of our foreign service should endow themselves and should exercise, because it is a true saying "that the character of a nation is judged by the character and deportment of her ministers and officers abroad." It is needless for one to add that we of Canada stand high in the regard of the other nations of the world. We have a record of which we are justly proud. Let us see to it that that prestige and that record are maintained in the highest manner possible.

There are two further thoughts which I would ask permission to mention briefly before concluding. These and any opinion relative thereto—and, I would like to add, any opinions expressed in these observations—should be considered as my own and in no way official.

The first of these thoughts involves the question, what in general terms should be the nature our approach to our foreign affairs? Surely that approach should be the encouragement of friendly relations, and the constant maintenance of such relations, with all the nations of the world,—to continually work to promote peace and understanding between Canada and them, as well as between themselves. To do that, in my opinion at least, it is essential to try with all our power to understand the just aspirations of all and to counsel moderation in every way possible. The world is by no means at peace of mind today. In some cases there are open quarrels, in other instances festering sores. We cannot say that the nations of the world are disarming, as we of Canada would like to see disarming take place. It would be more correct to say that armaments still hold a high place in the mind of man. We of Canada, to assist in overcoming this not too happy state of affairs, should view conditions without passion and with patience and understanding, seeking at all times the solution of difficulties by peaceful means. By doing so, we would avoid involving ourselves, and thus maintain the independent attitude of thought and entire absence from any selfish motive by which we are known throughout the world today. We indeed have what is almost, if not entirely, a unique position among the nations of the world. We go about our own business and interfere with none. We have done nothing to cause grievance against us. We have neither in the past sought favours, nor have we taken advantage of any, even in the most remote manner. Our hands are clean in every way, and we intend to so keep them by asking nothing and seeking nothing except by the most fair-minded and open methods of negotiation. We may be young in international affairs, but, if so, our youthfulness has not played us false—and the reason it has not played us false in the past, it is hoped, and will not in the future, is because we are not young in the science of government, and because we have never failed to recognize that the spirit of moderation and toleration must be applied not only in internal matters, but in those which are external as well.

With that record behind us, and those intentions before us, we are in a proud and not selfish position with the nations of the world, as well as being proud to be a nation of the British Commonwealth. While therefore we in no way imagine that we are capable of setting out to reform the world, our example and position, if so maintained in the future as it has been in the past, cannot fail to be a potent example to many—an example of what a nation, small in numbers, has been able to accomplish—all we have accomplished in our vast territory in the way of trade, order, and understanding by the methods of peace, toleration, and co-operation.

And the second thought which I alluded to is this: If we desire to continue our course of progress, if we desire to save the great structure we and our forefathers have reared in this Dominion, if we desire to maintain our position as the fifth trading nation of the world, if we desire to preserve our rightful place among the nations, and thus do our part in promoting peace and goodwill among them, if we desire to do any or all of these, the people of Canada, I say with all respect, will require to depend more on themselves as individuals. The people of Canada, as such, will require to exercise greater personal initiative in some respects than has been exhibited in the past. Governments, and officials of gov-

ernments, cannot be expected to do everything—and it is not too much to say in respect to our Government at Ottawa that it has done, and is doing, all in its power to serve you abroad in every manner possible.

An illustration of that is easily given in respect to Canadian affairs in the Far East, an area in regard to which I speak with some knowledge. It is an apposite observation, because today we look out on the Pacific Ocean and know that across its waters there are many nations and teeming millions. Thanks to your Government at Ottawa, you have a splendid organization in those parts. An organization which is better than that of many a nation, and the equal of any other. Leaving entirely aside the person who is in charge of that organization, you have a fine group of Canadians anxious and ready to do all in their power to serve you. They have courageously gone into the world. They have left friends, and much that is precious and agreeable to themselves—and all they ask for what they have given, and are ready to give, is the co-operation and support of their fellow-Canadians in Canada whose interests they seek to promote and serve. Is it too much to ask the people of Canada to give that co-operation in their own interests? I do not think it is. But, sorry as I am to say it, and notwithstanding repeated askings on my part, sufficient co-operation in trade matters has not so far been received either from individuals, or from corporations. Numerous reasons have been given for that want of co-operation. Some tell me that foreign trade is a matter for the Dominion Government alone. With that opinion I regret I do not agree. Others say that the distance is great. In that respect may I reply by saying that other countries at much greater distance than Canada do not find the distance so abnormal. Some say the expense of investigation is great. If that expense is too great for one single firm or corporation, it is very small if those interested in similar industry combine in groups. Another reason given is that pressure of affairs at home is too great. Those who say that completely overlook the fact that the finding of foreign markets is essential to relieve that very pressure of which they complain. With all respect, none of these excuses is justifiable in view of present and future conditions in Canada, and this, in addition, may be said that those markets will not come to us, and they at this very moment are being taken from us by those of other nations who do not hesitate to prosecute every means in their power to secure them.

You will forgive me, I hope, if I have spoken too plainly. I hope you will not have found anything I have said too disturbing, but sometimes the creation of disturbing thoughts leads to a better and more understanding result than the creation of those which are complacent or entirely pleasing. In any event, I know I have your forgiveness beforehand, because I am certain you know I do not speak in a personal vein and I am not ungrateful. I am grateful not only to you, but to the people of Canada, and to its Governments, for many an act of kindness, confidence, and consideration. In addition, I am grateful to my country itself—which in an humble way I have sought to serve—and, while at the moment clouds may temporarily darken her economic life, and hence the lives of my fellow-Canadians, I am certain that with courage and perseverance those clouds can ard will be scattered, and the sun will shine as brightly in the future as it has done during so many years in the past.

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*The substance of this article was delivered in a speech on October 6, 1932, to a convocation of the University of British Columbia, which conferred on the author the Honorary Degree of LL.D.

Our Canadian Speech

(*Continued from Page 28*)

man, and therefore a man of good character. There is nothing the world respects so much as this education. By ill speech the graduate does himself a great injustice; his real quality does not come forward for appraisal. A slovenly speech betokens a slovenly mind. A coarse speech over the telephone from a place of business suggests a coarse service within, by which customers are repelled.

If in these 13 minutes, I have not irritated or persuaded all who hear to perfect their Canadian speech by taking thought, then am I, as the Apostle lamented, merely speaking into the air.

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*A radio speech delivered, under the auspices of the Graduates' Society of McGill University, over Station CKAC, Montreal, November 25, 1932.

A McGill Conspectus

September-December, 1932

(WHEREIN *The McGill News* PRESENTS IN CONDENSED FORM SOME DETAILS OF THE UNIVERSITY'S RECENT ACTIVITIES AND ACCOMPLISHMENTS)

NEUROLOGICAL INSTITUTE PLANS

Further details of the new Neurological Institute to be erected by the University appeared in the press in September. The ground floor will contain photography equipment, administration offices, and waiting rooms; the second and third storeys will consist of public wards; the fourth storey will be devoted to private and semi-private wards; the operating room, two laboratories, and waiting rooms will occupy the fifth floor; the sixth and seventh are laboratory floors; and the eighth will house the resident staff. A racquet court, to afford the resident fellows opportunity for essential recreation, will extend through the seventh and eight floors. Ross and Macdonald are the architects; McDougall and Friedman are the mechanical engineers; and Wilson and Kearns are associate engineers.

NEW GOVERNORS APPOINTED

On November 14, Dr. W. W. Chipman, Emeritus Professor of Gynaecology and Obstetrics, and George C. McDonald, Chartered Accountant, were elected Governors of McGill University. Dr. Chipman, previous to his retirement three years ago, had brilliantly served the University for many years. Mr. McDonald, too, as a member of McGill's Corporation and as President in former years of the Graduates' Society, had rendered notable services. All with the welfare of McGill at heart will welcome these appointments, which give assurance that the outstanding support afforded to the University by the appointees in the past will be continued.

UNIVERSITY FINANCES

In the 1931-'32 Annual Report of Corporation to His Excellency the Governor-General, Sir Arthur Currie notes that through rigid economies a deficit of $420,908 authorized by the Board of Governors for the year ending May 31, 1931, was reduced to an actual deficit of $337,234.52. Further savings in current accounts, he notes, will be effected by a cut of $50000 in departmental budgets, and by the acceptance by all members of the University staff of a salary and wages cut totalling $87,500. Increased student fees, Sir Arthur observes, have been found unavoidable and these, now being paid, will further assist the University to meet the difficult financial situation that exists.

STUDENT FEES

Referring in the Annual Report of Corporation to student fees, Sir Arthur Currie points out that even with the increased fees now operative, McGil students pay a relatively low percentage of the cost of their education. In Arts and Science the student, in 1930-'31, paid fees equal to 33 per cent. of the sum expended by the University on his account. In other faculties the percentages were: Commerce 65, Engineering 20, Medicine 22, Dentistry 11, Law 37. Comparison with the fees in force in Great Britain, the United States, and elsewhere in Canada indicated that McGill's scale of fees could be increased, as has been done, and still accord to students advantages not easily obtainable elsewhere.

McGILL'S UNIQUE POSITION

Emphasis is given to the position of McGill as a national university, depending on private support, in figures quoted by Sir Arthur Currie in the Annual Report of Corporation to the Governor-General. These figures show that in the ten-year period 1920-'30 the University, exclusive of Macdonald College, received from the Province of Quebec $343,800 and a total from all sources of $2,924,478. When it is remembered that many of the other Canadian universities receive regular government subsidies ranging from $100,000 to $2,000,000 a year, McGill's unique position and the consequent need for very generous private support are strikingly revealed.

REGISTRATION FIGURES

Registration figures submitted to the University Corporation in mid-October show total undergraduate attendance at 2,344, compared with 2,283 in 1931. The Commerce total dropped from 255 to 217; Arts and Science rose from 1,221 to 1,266; Engineering increased 13 to 345; Architecture increased 6 to 51; Medicine rose 2 to 478; Dentistry was up 8 to 39; Law and the School for Graduate Nurses equalled last year's figures with 89 and 38 registrants respectively; and the Library School and School of Physical Education decreased by 4 and 9 respectively to 12 and 26. At Macdonald College, the School for Teachers is crowded to capacity, 223 students having registered, 29 more than in the previous year.

GRADUATE REGISTRATION

On October 22 registration in the Faculty of Graduate Studies and Research reached a total of 249. Classification was as follows: Studying for the degree of Ph.D. 82, for Master of Arts 93, Master of Science 47, Master of Engineering 19, and Master of Commerce 6. For the new degree, Master of Civil Law 2 graduates had been enrolled. Before the end of October total registration had increased to 274.

BRITISH EMPIRE REGISTRATION

Registration of Canadian students at McGill this year shows the following provincial totals: Quebec (outside Montreal) 205, Ontario 236, British Columbia 82, Nova Scotia 58, New Brunswick 56, Saskatchewan 36, Alberta 32, Manitoba 26, Prince Edward Island 18. British Empire students include: England 35, Newfoundland 34, Ireland 7, Jamaica 6, Scotland 5, South Africa, Bermuda, Barbados, and India 3 each, Trinidad 2, Southern Rhodesia, Irish Free State, St. Vincent, British Guiana, Wales, Antigua and Australia 1 each.

FOREIGN REGISTRATION

Publication of the Students' Directory in November revealed that 319 students were attending McGill from the United States, compared with 326 in the previous year. Thirty states of the American union are represented in the total, New York leading with 103 students, followed by Massachusetts with 39, and California with 37. From foreign countries, other than the United States, the registration is as follows: France 3, Switzerland 3, China 2, Alaska, Hawaii, Argentine, Japan, Germany, Cuba, and Denmark 1 each.

X-RAY OF STUDENTS

Through the co-operation of the Province of Quebec Industrial Hygiene Committee and that of one of the University's Governors, the McGill Department of Physical Education will this year examine 500 first-year students by x-ray, to gather data in regard to the incidence of tuberculosis among university students. This constitutes the first investigation of its kind in the Dominion of Canada. Full fruits of the knowledge obtained will not mature until the students so examined have completed their courses ,making possible a study of their medical record throughout their university years. Meanwhile, it is believed that the examination will prove of untold value in helping University authorities to give students that guidance in matters of health which adequate data alone makes possible.

GRADUATES' EMPLOYMENT BUREAU

Though revealing the difficult nature of the present time, the report of the Graduates' Society Employment Bureau for the year ending September 30, 1932, gives proof of creditable accomplishment. In all, 251 men and 79 women registered with the Bureau; 33 men and 11 women were placed in permanent positions; and 7 men and 7 women were temporarily placed, a total of 58 placements. The permanent placements of men were classified as follows: Engineering 17, Arts and Commerce 12, Medicine 2, Science and Architecture 1 each. Women were placed permanently as follows: Secretarial and clerical work 9, Librarian 1, Household Science work 1. Since the report was compiled, Mrs. Ward Phelps (Kathleen Best), B.A. (MacMaster) '29, M.A. (McGill) '30, has accepted appointment as Secretary of the Bureau.

BECOMES DEPUTY MINISTER

The Dominion Government announced on October 8 the appointment as Deputy Minister of Agriculture of G. S. H. Barton, B.S.A. (Toronto), D.Sc.A. (Laval), Dean of the McGill University Faculty of Agriculture and Professor of Animal Husbandry at Macdonald College. Dean Barton joined the staff of Macdonald College as Assistant in Animal Husbandry twenty-five years ago, rising to the position of lecturer in 1910, to that of professor in 1911, and to that of Dean of the Faculty in 1925.

SIR ARTHUR'S TRIBUTE

Commenting in the press on the appointment of Dean G. S. H. Barton to be Dominion Deputy Minister of Agriculture, Sir Arthur Currie said, in part: "The Government of the Dominion of Canada is to be warmly congratulated on the appointment. Dean Barton is a splendid administrative officer, a loyal and helpful colleague, and has the faculty of winning the respect of all with whom he comes in contact. Canada gains what Macdonald College loses—and we know he will make a splendid contribution to the well-being of Canadian agriculture, whose prosperity means so much to us all."

ACTING DEAN APPOINTED

Early in November the University announced that Professor John Ferguson Snell, of the Department of Chemistry, had been appointed Acting Dean of the Faculty of Agriculture, pending a permanent appointment which would be announced later. Professor Snell, a graduate of Toronto and Cornell Universities, has served on the staff of Macdonald College for the past 25 years.

CHILDREN'S HOLIDAY LECTURES

In the Christmas holidays, members of the Physics Department will again present a series of illustrated lectures for school children similar to those that have proved so popular in the past. The lectures will be delivered in the Physics Building at 8 p.m. as follows: Monday, Dec. 26, "Light Visible and Invisible" by Dr. D. A. Keys; Wednesday, Dec. 28, "Flying in the Water" by Prof. F. E. Lloyd; Friday, Dec. 30, "The Adventures of a Molecule" by Dr. A. N. Shaw; Monday, Jan. 2, "Waves" by Dr. A. S. Eve. Adults may attend if they desire, and tickets for the series of lectures may be purchased for 80 cents. Single tickets will be sold at the door, if seats are available, at 25 cents each.

DR. McLENNAN'S RESIGNATION

Friends of McGill and all who hold the University's welfare in regard will be pleased to know that the recent resignation from the Board of Governors of Dr. Francis McLennan, B.A. (Harvard), B.C.L. '84, LL.D. '21, will not mark the end of Dr. McLennan's active interest in the University. Dr. McLennan's father served for a time on McGill's Board of Governors and the Doctor will continue, as in the past, the interest which has been of so great value to the Library and other of the University's most active departments.

LIVER AND SPLEEN PHOTOGRAPHS

Striking advances in x-ray photography of the liver and spleen were announced by the University in October, co-incident with the appearance in *The Canadian Medical Association Journal* of an article by Dr. R. Gottlieb, Flinn Research Fellow, reporting the results of work in this field. Under the auspices of the University Medical Clinic, Dr. Gottlieb, using himself for experimentation, established that a colloidal solution of thorium dioxide injected into the blood stream will rapidly render the liver and spleen capable of being successfully photographed, without harmful effects. Such use of thorium dioxide is not new in itself, having been applied in Germany for some years, but the experiments at McGill mark its first application to x-ray photography in Canada and the results have been so striking that hope of further notable success is definitely encouraged.

52 DEGREES GRANTED

Fifty-two degrees and four diplomas were conferred by the University at the annual Fall Convocation, held at noon in Moyse Hall on Founder's Day, Thursday,

October 6. The degrees granted on this occasion were: Doctor of Philosophy 14, Master of Arts 4, Master of Science 5, Master of Engineering 1, Bachelor of Civil Law 2, Bachelor of Engineering 9, Bachelor of Commerce 13, Bachelor of Science 2, Bachelor of Arts 6, and Bachelor of Science in Agriculture 1.

McCORD MUSEUM EXHIBITS

A series of exhibits, referring to the historical periods being studied in the 5th and 6th grades in Montreal schools, is being presented this winter by the McCord Museum. Two exhibits have already been offered; those arranged for the New Year are: Jan. 9-Feb. 11—Conquest of Quebec and Civil Re-establishment (1750-'70); Feb. 14-March 10—War of American Independence, United Empire Loyalists (1770-1800); March 20-April 15—War of 1812, North-West Rebellion, Northern Exploration (1800-'70); April 20-May 31—Second Riel Rebellion, Railway and Industrial Development, Canada in the Great War (1870-1920).

GREAT WAR EXHIBIT OPEN

With the explanatory title "The Great War in Retrospect," the University Library has opened and will maintain until January 7, 1933, a fine exhibit of war documents, literature, and material of historic interest. In addition to University property, the exhibit comprises loans from the Black Watch (Royal Highlanders of Canada), the Canadian Grenadier Guards, Sir Arthur Currie, Col. Wilfrid Bovey, Col. R. R. Thompson, Professor Ramsay Traquair, and G. M. Gest. The exhibit is open every week day, except Saturday, from 9 a.m. to 9.30 p.m.

GYMNASIUM SITE ACQUIRED

Cession by the City of Montreal to McGill University of 12,556 square feet of land on the north side of Pine Avenue east of the Percival Molson Memorial Stadium was announced in September. This triangular property completes the site ear-marked for the University's hockey rink and gymnasium. Construction of these is not imminent; but will proceed, it is hoped, as soon as financial conditions warrant the necessary expenditure.

PROPERTY TRANSFERS

In addition to the transfer mentioned above, McGill University and the City of Montreal have exchanged several pieces of land in the University Street—Pine Avenue area. McGill ceded to the City land which permitted the widening of Pine Avenue east of the Stadium, also a small plot which provided greater safety for traffic at the corner of University Street and Pine Avenue. In return the City transferred to McGill a strip of land with a small frontage on Pine Avenue, but with considerable value to the Stadium and Macdonald Park. McGill has also sold to the City some property atop the Westmount Mountain, where a 5-million gallon reservoir is to be installed.

DISEASE-RESISTING GRAIN

Experimentation in search of a grain that would be disease-resisting and would grow anywhere in the Province of Quebec, particularly in the newly-cleared land of Abitibi and the Lake St. John district, was carried out at Macdonald College last summer and autumn by Professor J. G. Coulson, of the Department of Plant Pathology. Results in experiments of this nature are seldom conclusive under ten years; but through the artificial provision of humidity, inadequate sunlight, and exposure to infection, interesting results in the present experiments may be obtained in a much shorter time.

HELMINTHOLOGY APPOINTEE ARRIVES

Dr. T. W. M. Cameron, newly-appointed Professor of Animal Parasitology and Director of the University's Institute of Helminthology at Macdonald College, arrived from Scotland and assumed duties in September. He found the building that is to house the Institute standing and ready to be equipped. In this building, under his direction, there will be continued, with the co-operation of the Empire Marketing Board and the National Research Council of Canada, work so successfully begun in the study and treatment of parasitical animal diseases. The potentialities of contribution to the agricultural welfare of the Dominion in this field are so striking that the work of the Institute will be followed with more than ordinary interest.

C.O.T.C.'S 21ST SEASON

The McGill Contingent, Canadian Officers' Training Corps, opened its twenty-first season of drill and training at the armoury of the Canadian Grenadier Guards early in October. Possessing fine mess accommodation, the unit, which perpetuates the 148th Battalion of the Canadian Expeditionary Force, attracted a record number of recruits, who will study for infantry certificates, the cavalry course having been discontinued. New uniforms, open at the collar and smart in cut, were issued this year; and the season was launched with every prospect of satisfactory accomplishment. Lieut.-Col. E. B. Q. Buchanan is again in command, and all officers are graduates of McGill or members of the University staff.

C.O.T.C. BATTLE HONOURS

His Majesty the King has approved the granting of the following Battle Honours to the McGill University Contingent, Canadian Officers Training Corps, which perpetuates in the Canadian Militia List the 148th Battalion, C.E.F.: Arras, 1917, '18; Hill 70; Ypres, 1917; Amiens; Hindenburg Line; Pursuit to Mons. In each of these battles of the Great War, 250 or more members of the McGill C.O.T.C., or the 148th Battalion, C.E.F., took part.

CHINESE WOMAN'S BIOGRAPHY

What is believed to be the first biographical study of a Chinese woman to appear in any language is contained in a book entitled "Pan Chao, the Foremost Woman Scholar of China," by Dr. Nancy Lee Swann, of the Gest Chinese Research Library, McGill University, published recently by the American Historical Association. Pan Chao, one of the earliest advocates of education for women, was a poet, historian, moralist, essayist, and teacher of far-reaching influence and this account of her life, work, and character is regarded as an important contribution to Western understanding of Oriental literature and history.

UNEMPLOYMENT RESEARCH

Eighteen graduate students, as compared with nine last year, are taking part, under Professor Leonard C.

Marsh, in research being conducted at McGill into the problems and social aspects of unemployment. Graduates from McGill, Toronto, Saskatchewan, and the University of British Columbia are participating in the research, which is most comprehensive in character.

DR. NOBLE DIES, AGED 101

Many graduates of the University who read in *The McGill News* more than a year ago that Dr. Charles Noble, of Sutton, Ontario, had reached his 100th birthday will regret to hear that the aged physician, who attended McGill from 1853-'55, died in mid-November in his 102nd year. He was the father of Dr. Charles Noble, Jr., Med. '90, who survives and is carrying on the practice and the fine tradition of service to those in need that Dr. Noble, Senior, established.

MANY SCHOLARSHIPS HELD

Thirty-six graduate students of McGill University were holding scholarships in the United States and Europe as the present academic term opened. Five of these were holding Rhodes Scholarships at Oxford; six were holding Quebec Government Scholarships abroad; six were 1851 Exhibition Scholars at Cambridge, Munich, or London; and others were studying at Dijon, Paris, Johns Hopkins University, Radcliffe College, Yale, Harvard, and Cornell. In addition to these, one graduate was holding a Banting Fellowship in biochemistry in Toronto.

SIR JAMES IRVINE'S LECTURE

Sir James Irvine, Principal of St. Andrew's, the oldest university in Scotland, was the guest of Sir Arthur Currie in October and delivered in Moyse Hall an address under the auspices of the National Council of Education and McGill University. The town and University of St. Andrew's, Sir James pointed out, are little changed since the days of Knox, Montrose, Claverhouse, the Admirable Crichton, and others honoured in the University's history. St. Andrew's was established in A.D. 1411, but had acted as a teaching institution for at least 200 years before that time. Sir James was introduced by Sir Arthur Currie and was thanked for his fascinating lecture by Dean Ira A. Mackay.

OCTOBER 26, 1882

On October 26, 1882, Professor Clarke Murray, at a meeting of the Faculty of Arts of McGill University, proposed that "the educational advantages of the Faculty of Arts should be thrown open to all persons without distinction of sex." Fifty years have thus passed since women were officially admitted to McGill. No provision for the accommodation of women students was made for two years after Professor Murray's resolution was passed, and no women were actually admitted until the accommodation had been prepared, nevertheless the date remains a memorable one in the University's history.

MACDONALD COLLEGE ANNIVERSARY

On November 5, 1932, Macdonald College celebrated the 25th anniversary of its opening. On November 5, 1907, 115 students registered in the School for Teachers, 62 in the School of Household Science, and 38 in the School of Agriculture. *The McGill News* welcomes this opportunity to congratulate the College on its silver anniversary and, in paying tribute to the memory of Sir William Macdonald, its founder, to wish the College continued good fortune in the years to come.

TRIBUTE TO THE M.G.H.

On his way to deliver the Murphy Memorial Oration before the Clinical Congress of the American College of Surgeons in St. Louis, Mo., Sir William J. de C. Wheeler, of London, England, past president of the Royal College of Surgeons of Ireland, spent a day in visiting the Montreal General Hospital. To a *Gazette* reporter, Sir William said: "I saw work which was highly scientific; the operating technique drew my warmest admiration; I have been all over the world, but have never seen more perfect x-ray pictures than I was shown this morning; I fancy the secret of the hospital's success lies in the spirit of teamwork animating those connected with it."

MICROPHONE TECHNIQUE STUDIED

With a view to obtaining the best possible results in all University broadcasts, a McGill Radio Committee, composed of Dean A. S. Eve, Professor Frederick Clarke, Col. Wilfrid Bovey, and A. Robert George, has been appointed to study the art of speaking over the microphone. Many excellent speakers fail utterly to impress radio audiences, and the findings of the committee, it is hoped, will help to reveal why this should be so. The first meeting of the committee was held on November 16, and the result of the investigations then inaugurated will be awaited with much interest. Many other aspects of the University's broadcasting work will also claim the committee's study and attention.

EXTENSION WORK INCREASES

Notable increase in the range of courses being presented by the University's Extension Department appears in the announcement of this year's programme. Fifteen courses in 6 subjects were given last year; 36 courses in 16 subjects are offered this year. There are courses in English, History, Religion, Philosophy, Psychology, Sociology, Law, Languages, Chinese Studies, Physics, Engineering, Metallurgy, Geology, Genetics, Dentistry, and Library Work. Academic credit is granted in some instances; in others the courses are designed to meet conditions where no credit is desired.

EXTRA-MURAL LECTURES

Five hundred and seventy-two extra-mural lectures were delivered by 131 members of the University staff last year, exclusive of impromptu addresses and speeches of an informal character. Professor Kiang Kang-hu, of the Department of Chinese Studies, delivered a total of 72 lectures, far exceeding the number delivered by any colleague, though Dr. A Grant Fleming, of the Department of Public Health, presented 25. Sir Arthur Currie, Professor J. E. Latimer (agricultural economics), Col. Bovey, Professor F. E. Lloyd (biology), Professor P. F. McCullagh (classics), Dr. C. L. Huskins (genetics), Dr. J. P. Day (economics), Professor H. E. Reilley (physics), and Dr. A. Vibert Douglas (physics) were among the lecturers whose services were most insistently in demand.

LITERARY LECTURE SERIES

Commencing on November 3 and continuing until January 26, a series of ten lectures on "Some Living

Forces in Modern Literature" is being delivered in Ogilvy's Tudor Hall by Professors A. S. Noad and H. G. Files, of the University's Department of English. Oswald Spengler, Charles Doughty, Lytton Strachey, Paul Valery, English Poetry, and American Poetry will have been discussed when this issue of *The News* appears. At 8.15 p.m. on January 5 the subject will be Eugene O'Neill; a week later, on January 12, Luigi Pirandello will be discussed; on January 19 Karel Capek will provide the subject for discussion; and on January 26 the series will end, with a lecture on Maxim Gorky, changing Russia, Gorky's relation to the change, and his importance as a novelist and literary influence. The price of tickets for single lectures is 40 cents.

OTTAWA VALLEY MEETING

Seventy members, including Mr. P. D. Ross, the new President of the Graduates' Society of McGill University, attended the Annual Meeting of the Ottawa Valley Graduates' Society of McGill University on November 17. The report of the Secretary-Treasurer showed the Society to be in healthy financial condition, and it was decided again to offer a $75 prize to the student from the Ottawa Valley who comes second highest in the McGill matriculation examinations next spring and who attends the University in the following session. The meeting warmly congratulated Mr. Ross on his election to the presidency of the parent society.

GEST LIBRARY PRAISED

Declaring to the press that the collection of works in the Gest Chinese Research Library at McGill was the finest outside the Orient, Carrington Goodrich, Sinologist and lecturer at Columbia University, who for two years has served as Willard Straight Fellow in the University of Peiping, explained that, though a larger collection existed in the Library of Congress, Washington, the Gest Library contained fewer duplicates and a finer selection.

FRENCH LIBRARY SCHOOL

On September 2, 1932, a ceremony in Moyse Hall brought to a close McGill's first Summer Library School in the French Language. Thirteen students received from Sir Arthur Currie certificates for the full course and two for partial work. In his address, Sir Arthur mentioned that the occasion was not without historic interest, as it marked the conclusion not only of the first Library Course in French, but the first complete course in that language to be given by any University department, other than the French Department.

CHICAGO FAIR EXHIBIT

Some details of the McGill University Medical exhibit at the 1933 Chicago World's Fair were recently made public. The exhibit will include what is believed to be the earliest x-ray photograph made for medical purposes in North America, taken at the time by the University's Department of Physics; an illuminated diagram of the University buildings and the Royal Victoria Hospital; a display illustrating the life and influence on medicine of Sir William Osler; a display illustrating the growth and development of the McGill Medical School and the Montreal General Hospital; and a feature revealing the tremendous growth and accomplishment of the University's scientific departments.

(Continued on Page 61)

WEST INDIES



Ho! for a Sun Tan!

à la Empress . . . **14** DAYS . . . **$155** UP
à la Duchess . . . **28** DAYS . . . **$280** UP

THREE CRUISES
FROM NEW YORK . . JAN. 7 . . JAN. 14 . . FEB. 8

Sail calm, turquoise seas to pleasure and health. Go strange places, do interesting things. Watch your brand new sun tan deepen as the days go by. Costs but a pittance! Yields so much!

Empress of Australia (21,850 gross tons) sails Jan. 14 to Bermuda, Jamaica, Havana, Nassau . . . . 10 days at sea, 4 days ashore.

Duchess of Bedford (20,000 gross tons) sails Jan. 7 and again Feb. 8 for a more leisurely cruise to 13 British, Dutch, French, Old Spanish, and Canal Zone ports . . . 18 sea days, 10 shore days. Both famous cruise liners do things in the Trans-Atlantic manner. Reserve early. Get deck plans and itineraries. From your own agent, or any agent of the Canadian Pacific or the Cruise Dept., Windsor Street Station, Montreal.

CANADIAN PACIFIC

Personals

THE McGILL NEWS invites from graduates personal items for inclusion in these columns. Press clippings or other notices should be addressed to H. R. Morgan, Esq., Recorder Printing Company, Brockville, Ontario; or to the Executive Secretary, Graduates' Society, McGill University, Montreal.

HON. R. A. E. GREENSHIELDS, Arts '83, Law '85, LL.D. '29, Chief Justice of the Superior Court of the Province of Quebec, has been elected Chancellor of the University of Bishop's College, Lennoxville.

ALBERT JOSEPH BROWN, K.C., Arts '83, Law '86, LL.D. '23, a Governor of the University and director of a number of Canada's foremost institutions, has been appointed to the Dominion Senate.

COL. R. F. STOCKWELL, Arts '08, Law '11, President of the District of Bedford Branch of the Graduates' Society, has been appointed Provincial Treasurer of the Province of Quebec.

DR. CYRIL N. H. LONG, Med. '28, has been appointed Director of the George S. Cox Medical Institute for Research in Diabetics at the University of Pennsylvania.

DR. PERCY H. ROBERTS, Med. '31, and Mrs. Roberts sailed from Montreal in September to undertake medical mission work at a point some 200 miles from Addis Ababa, the capital of Abyssinia.

DR. ABRAHAM EDEL, B.A. '27, M.A. '28, has been appointed lecturer in philosophy at the College of the City of New York.

H. L. FETHERSTONHAUGH, A.R.I.B.A., Arch. '09, was awarded first place for his Church of St. Andrew and St. Paul, Montreal, in the ecclesiastical buildings section of the Royal Architectural Institute of Canada's annual exhibition of design held in Toronto in November.

ARTHUR A. COLE, B.A. '91, B.Sc. '94, M.A. '97, contributed an article entitled "Ontario's Route to the Sea" to the September number of the "Canadian Geographic Journal."

G. R. LOMER, B.A. '03, M.A. '04, University Librarian, recently conducted a survey of the libraries of Prince Edward Island on behalf of the Carnegie Foundation.

P. E. CORBETT, B.A. '13, M.A. '15, Dean of the Faculty of Law, resumed duties at McGill this autumn after a year's leave of absence.

A NEWS LETTER has been distributed to the Class of Science, '31, by H. W. Lea, the Class Secretary.

S. AGNES CAMPBELL, Grad. Nurses '30, has been appointed Superintendent of the Guelph, Ontario, General Hospital.

DR. JAMES T. ROGERS, Med. '04, has been elected 2nd Vice-President of the American Academy of Ophthalmology and Otolaryngology for 1933.

HENRY B. STUART, Sci. '92, has retired from the Canadian National Railways and has opened an office as a Consulting Engineer in Toronto.

McGILL GRADUATES at present working in London, England, include: John Culliton, M.A. '27; Dr. Arthur Elvidge, Med. '24, M.Sc. '25, Ph.D. '27; Dr. J. F. Heard, M.A. '30, Ph.D. '32; H. D. Woods, M.A. '31; J. C. Merrett, Arch. '31; Robert Picard, B.A. '31, M.A. '32; D. L. Blair, Arch. '32; May Savage, B.A. '27, M.A. '30; and Ida Greaves, B.A. '29' M.A. '30.

DR. ROBERT H. ARTHUR, Med. '85, of Sudbury, was in September elected Vice-President of the Medical Council of Canada. In October he was re-elected to represent District No. 8 in the Council of the College of Physicians and Surgeons of Ontario.

DR. JOHN F. ARGUE, Med. '96, Ottawa, has been elected to represent District No. 7 in the Council of the College of Physicians and Surgeons of Ontario.

THE REPORT OF THE DUFF COMMISSION on Transportation included in its main principles a number of recommendations submitted to the Commission by G. McL. Pitts, Sci. '08, M.Sc. '09, Arch. '16, and outlined in his article in *The McGill News* last March.

WALTER W. MURRAY, past student Med. '26, has been appointed Manager of the North American Life Assurance Company's branch in Sherbrooke, P.Q.

MRS. F. N. PERSKY (Fanny Novick), Arts '20, J.D. (Chicago), '30, is doing graduate work in Romance Languages at Chicago University.

DR. O. O. LYONS, Med. '17, has been appointed part-time physician of the Indian Agency at Powell River, B.C., of the Department of Indian Affairs.

COLONEL LORNE DRUM, Arts '92, Med. '96, of Victoria, B.C., has been appointed Director-General of the Canadian branch of the St. John Ambulance Association, Ottawa.

DR. ELSON I. REXFORD, Arts '76, and Mrs. Rexford, of Westmount, Que., celebrated the fiftieth anniversary of their wedding at their summer home at Knowlton, Que., on September 13.

DR. R. RUGGLES GATES, Arts '06, professor of botany at the University of London, visited this continent during the summer to speak at the International Conference on Genetics at Ithaca, N.Y., and to lecture at the University of Toronto, The University of Chicago, the University of Minnesota and Johns Hopkins University.

LT.-COL. WALTER C. HYDE, D.S.O., V.D., Arch. '15, has been promoted to the rank of colonel and to the command of the 2nd Montreal Regiment of Artillery.

AMONG THOSE WHO CONTRIBUTED papers to the international assembly of the Inter-state Post Graduate Medical Association of North America held in Indianapolis in October were Dr. Edward W. Archibald, Arts '92, Med. '96, Dr. J. R. Fraser, Med. '10, Dr. Harold B. Cushing, Med. '98, and Dr. Campbell P. Howard, Arts '97, Med. '01, all of Montreal.

REV. DR. GEORGE WHILLANS, Arts '82, has retired from the active ministry of the Presbyterian Church in Canada after 45 years as the minister of the Church at Georgetown, Que.

DR. GEORGE STEPHENS, Med. '07, superintendent of the Winnipeg General Hospital, was chosen president for the ensuing year by the annual convention of the American Hospital Association, held in Detroit in September.

DR. H. M. TORY, Arts '90, president of the National Research Council of Canada has received the honorary degree of Doctor of Laws from the University of Western Ontario.

ERIC A. LESLIE, Sci. '16, deputy comptroller of the Canadian Pacific Railway, has been elected honorary treasurer of the Montreal Y.M.C.A.

DR. SIDNEY F. BLANCHET, Med. '08, of Saranac Lake, N.Y., has been elected treasurer of the fourth district of the New York State Medical Society.

DR. HAROLD J. MACK, Med. '16, has succeeded Dr. J. A. Tallon, Med. '19, as President of the Medical Association of Cornwall, Ont.

DR. E. ELLICE McDONALD, Med. '01, Director of cancer research in the Graduate School of Medicine at the University of Pennsylvania, described four years of experimentation in the laboratories under his control at the annual meeting of the American Chemical Society held at Denver in August.

THE UNIVERSITY OF BRITISH COLUMBIA has conferred the honorary degree of Doctor of Laws upon the Hon. H. M. Marler, Law '98, Canadian Minister to Japan.

AUGUSTE ANGERS, K.C., past student, Crown Prosecutor for the District of Montreal, has been appointed Recorder of the Town of Montreal South.

GEORGE C. McDONALD, Arts '04, of Montreal, has been elected Vice-President of the Dominion Association of Chartered Accountants.

BRIG.-GEN. H. F. McDONALD, C.M.G., D.S.O., Sci. '07, of the Dominion Pensions Tribunal, is a member of the Committee appointed by the Dominion Government to examine the administration of the Pensions Act. The Chairman of the Committee is Hon. Thibaudeau Rinfret, Law '00, of the Supreme Court of Canada.

MAJOR W. E. GLADSTONE MURRAY, Arts '12, who has been associated with the British Broadcasting Company for some years, is being loaned to the Canadian Government to advise in regard to Canada's National Broadcasting system. Major Murray, a Rhodes scholar, was the founder of the *McGill Daily*, and is an authority on wireless broadcasting.

REV. DR. H. H. TURNER, Arts '98, of Leamington, Ont., has become minister of St. Paul's Presbyterian Church, Ingersoll, Ont.

JOHN A. HEAMAN, Sci. '02, has retired from the post of chief engineer of the Grand Trunk Western Region at Detroit, Mich. He entered railway service as an instrument man with the Grand Trunk in 1901 and held important appointments during his long period of service.

DR. J. C. SHANKS, Med. '81, on leaving Howick, Que., to reside in Toronto after 51 years of practice in that community was the guest, with Mrs. Shanks, at a banquet when his services were eulogized by Dr. C. F. Martin, Arts '88, Med. '92, of Montreal, and many other friends and confreres.

F. WINFIELD HACKETT, Law '17, of Montreal, has been elected Vice-President of the International Association of Insurance Counsel and Canadian representative on the executive.

HAROLD S. JOHNSTON, Sci. '09, of the Nova Scotia Power Commission, has been elected to the directorate of the Y.M.C.A., Halifax, N.S.

JOHN L. KINGSTON, Sci. '10, after some years practice of architecture in New York City, has returned to Canada and opened an office at 372 Bay Street, Toronto.

COL. A. L. S. MILLS, D.S.O., Law '14, has retired from command of the Royal Highlanders of Canada (Black Watch), after a connection of 18 years with the regiment.

DR. H. K. McDONALD, Med. '96, has been appointed head of the department of surgery at Dalhousie University, Halifax, N.S., succeeding Dr. E. V. Hogan, Med. '96, who recently resigned.

JOHN R. DOUGALL, Arts '60, LL.D. '21, sole survivor of pre-Confederation editors in Canada, is still the active editor of the Montreal Witness. He celebrated his 91st birthday on August 17.

DR. G. R. LOMER, Arts '03, the University Librarian, has been elected President of the Quebec Library Association.

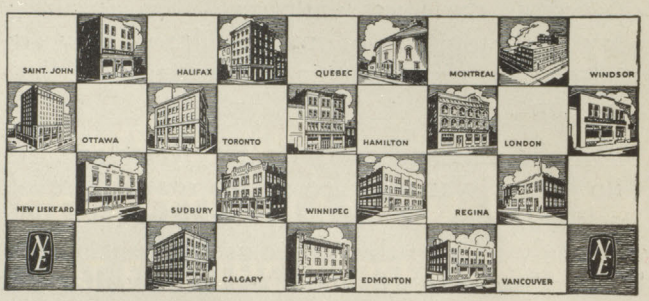
THE CANADIAN EFFICIENCY DECORATION has been conferred upon Captain J. S. Brisbane, Sci. '15, of the McGill C.O.T.C., and the Colonial Auxiliary Forces Officers' Decoration upon Lt.-Col. A. B. Walter, Med. '12, of the C.A.M.C.

HON. WALTER G. MITCHELL, K.C., Law '01, has been elected President of the Corporation and Board of Management of the Verdun, Que., Protestant Hospital.

JOHN GORDON, Sci. '26, is a partner in the newly-formed investment banking firm of McTaggart, Hannaford, Birks & Gordon, with offices in the Aldred Building, Montreal.

(Continued on Page 61)

A National
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THE NORTHERN ELECTRIC COMPANY has its offices and warehouses located as above.

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Book Review

THE HISTORY OF TASTE. FRANK P. CHAMBERS (*Assistant Professor of Architecture, McGill University*). COLUMBIA UNIVERSITY PRESS. 8vo. 342 pp.

WHEN, in 1801, the Elgin marbles were brought to London, competent critics condemned them as crude, ugly, and imperfect. They were only saved from rejection by the clearer vision of a few foresighted individuals. Had they not been "Grecian," with all the traditions of classical education to speak in their favour, they would almost certainly have been condemned. Fifty years ago the same marbles were generally regarded as the finest sculptures ever executed; today in the opinion of many sculptors they are good of their period, but not necessarily the best of all time.

To take a second example, fifty years ago the Milo Venus was regarded as the masterpiece of Greek sculpture. Even today journalists not uncommonly refer to this statue as representing the "perfect" woman's figure. Yet I think that the considered opinion of the best judges today is that the Milo Venus is a good example of a secondary school, nothing more, and certainly very far from perfection.

"Taste" has in fact changed. One generation condemns, another admires, and a third is indifferent to the same object, yet the object presumably remains equally good or bad all the time. Our appreciation has altered. Can then any rule be formulated by which we may account for, or explain or foresee such changes, or is taste simply a matter of personal and accidental feeling? Can we account for tastes?

In *The History of Taste*, Professor Chambers has written a history of Art Criticism from the beginning of the Middle Ages to our own day, with, in the appendix, a short account of the Classic cycle of taste. He dwells principally, as is very natural, upon the self-conscious arts of the Italian and French Renaissance, and upon the even more self-conscious status of the modern artist. He tells us of the practical craftmanship of the Middle Ages, the first aesthetic theorists of the Italian Renaissance, the Academies in France, the rise of "romanticism," and the emergence of the "rebel" artist of today. These movements he assembles and reviews under the old banners of Classicism and Romanticism, though here I feel that the term "academism" would be a better term than "classicism" for that school which prefers to work under a rule of authority, whilst the romantics acknowledge no rule save that of their own personality.

This cleavage is of course very old. Some men find spiritual freedom in the strict rule of a monastery, some would find only spiritual chains. This at least may be asserted, that some kind of a rule or limitation is necessary. Most artists do their best work when under some form of compulsion, the academic artist works best under the accepted rule of his day, the romantic under a rule which he makes for himself. Academism is today a mocking and a reproach; we are all for the free play of individuality, and the new word for a rule is "inhibition." Yet great work has been done in the past by the academic schools and will be done again in the future.

Professor Chambers has deliberately confined himself to a review of the literary sources. The art criticism of today is of course an expression of today's ideas but, to understand a work, we must surely know what the people of its day thought not only of it but of the function of the fine arts at that time. We appreciate a Gothic Cathedral for *XX* Century reasons. We admire not only the skill of the carving, the beauty of the proportion, and the composition of the masses, we also appreciate its venerable age, its historic traditions, and its weatherworn colour. But the generation which built the cathedral plainly could not appreciate an age or a history which had not yet been born. What did they admire? Did they admire what we admire, in any way? Can we in fact understand the Fine Art of any period without reading the art criticism of that period? Can we understand the painting of the *XVIII* Century without reading Reynold's discourses? Probably not, but many people are trying to.

There remains of course the history of taste as displayed in the monuments themselves. Most histories of the Fine Arts content themselves with recording changes and classifying them into "schools" and "periods", without attempting to explain why these changes came about or why they took the particular forms they did. Yet there seems to be some kind of regularity in the process. Each generation regards the artistic work of its fathers with contempt; and change is conditioned by revolt as well as by admiration. In the history of Art there have been at least two "mediaeval" periods, two "rococcos," and possibly three "renaissances." The deliberate archaism of much modern sculpture, the admiration

for crude savage art, is no new thing. It occurred under the Pharoahs in ancient Egypt, as well as in classical Rome. All the important doctrines of the modern "functionalist" in architecture were announced over a hundred years ago by Augustus Welby Pugin. An understanding of the History of Taste is in fact very necessary if we are to see our way clearly today in artistic matters.

The whole of this history has not yet been explored, but Professor Chambers' book will open up a new aspect of art history to many readers. They may come to understand a little how a work of art, admired yesterday, may be condemned today; and how possibly one admired today may be despised tomorrow. The book is well printed with a useful biography, a good index, and a few well-chosen illustrations.

RAMSAY TRAQUAIR

Births

COOPER—In Saint John, N.B., on October 26, to Donald F. Cooper, Sci. '26, and Mrs. Cooper (Margaret L. Beer, Phys. Ed. '23), a son.

CROMBIE—In Montreal, on November 1, to Hugh A. Crombie, Sci. '18, and Mrs. Crombie, a son.

ESDALE—In Ottawa, on May 14, to Dr. W. Rupert Esdale, Med. '26, and Mrs. Esdale, a daughter.

HUMPHREYS—In Ottawa, on December 26, 1931, to Dr. John Charles Humphreys, Med. '21, and Mrs. Humphreys, a daughter.

HYNDMAN—In Montreal, on October 23, to Dr. Alex. W. Hyndman, Dent. '24, and Mrs. Hyndman, a son.

HYNDMAN—At Sherbrooke, P.Q., on August 26, to E. Douglas Hyndman, Sci. '21, and Mrs. Hyndman, of Three Rivers, P.Q., a son.

JEAKINS—In Montreal, on October 25, to John W. Jeakins, Arts '13, and Mrs. Jeakins (Dorothy G. Hicks, Arts '17), a daughter.

KERR—In Montreal, on August 26, to Trevor W. Kerr, past student, and Mrs. Kerr, a son.

LINDSAY—In Montreal, on October 10, to Dr. Lionel M. Lindsay, Med. '09, and Mrs. Lindsay, a son.

LONG—In Montreal, on September 2, to J. W. Long, Law '22, and Mrs. Long, a daughter.

MacKEEN—In Ottawa, on August 26, to David W. MacKeen, Sci. '22, and Mrs. MacKeen, a son (died August 27).

McLETCHIE—In Montreal, on October 1, to James McLetchie, Arts '24, and Mrs. McLetchie, a son.

NAYLOR—In Montreal, on October 25, to Rev. R. K. Naylor, Arts '06, and Mrs. Naylor, a daughter.

SHAPTER—In Walkerville, Ont., on September 9, to Carl Shapter, Sci. '20, and Mrs. Shapter, a son.

SILVER—In Ottawa, on July 25, to Ralph C. Silver, B.Sc. '27, M.Sc. '29, and Mrs. Silver, a daughter.

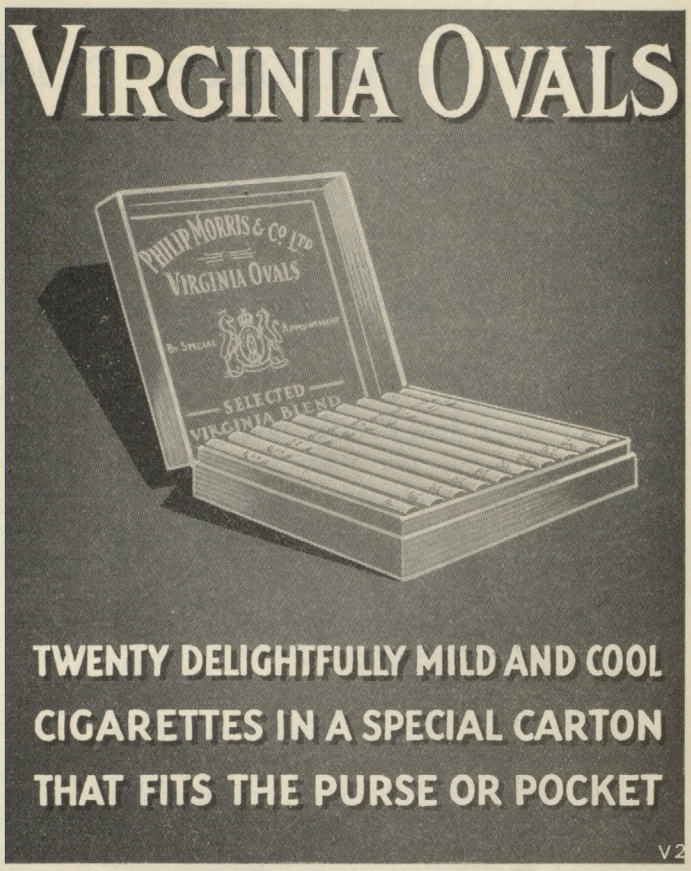
SUTHERLAND—In Montreal, on August 4, to R. D. Sutherland, Sci. '14, and Mrs. Sutherland, a daughter.

SWAN—In Montreal, on September 15, to Andrew W. D. Swan, Com. '29, and Mrs. Swan (Ruth Harrison, Arts '29), a son.

VOSS—In Montreal, On August 15, to Dr. Henry E. Voss, Med. '30, and Mrs. Voss (Florence Norton, Macdonald College School for Teachers), a daughter.

WIELAND—At Williamsport, Pa., on August 14, to Walter A. Wieland, Arts '17, and Mrs. Wieland, a son.

WILLIAMSON—In Montreal, on November 1, to Dr. Norman T. Williamson, Med. '20, and Mrs. Williamson, a son.





Graduates' Society Broadcasts

RADIO broadcasts sponsored by the Graduates' Society of McGill University were inaugurated successfully in October and are to continue throughout the present winter. Twice a week, on Mondays from 8 to 8.15 p.m. and on Fridays from 10.30 to 10.45 p.m., Graduates' Society speakers can be heard over Station CKAC, Montreal. Graduates and friends of the University are cordially invited to tune in on CKAC each Monday and Friday night and join the number of those who have found pleasure and interest in the addresses the Society has been privileged to arrange. Up to the time when this notice was prepared for print, the following speakers had appeared on the Society's programme; or accepted appointments to speak in the immediate future: Oct. 21—G. McL. Pitts, President, Montreal Branch, Graduates' Society; Oct. 24—P. D. Ross, President, Graduates' Society of McGill University; Oct. 28—Students' night, Messrs. Shaughnessy, McGill, Craig, Olker, and Griffiths, and the McGill band; Oct. 31—John T. Hackett, K.C.; Nov. 5—Dr. A. S. Lamb, Director of the Department of Physical Education; Nov. 7—Dr. John F. McIntosh, on Mongolia; Nov. 11—Sir Arthur W. Currie, on the Armistice and Remembrance; Nov. 14—R. C. Fetherstonhaugh, Editor, *The McGill News;* Nov. 18—Dr. C. F. Martin, Dean of the Faculty of Medicine; Mr. Sharpe (on behalf of Mr. Walter Stewart, a governor of the University), on Sir William Macdonald; Nov. 25—Sir Andrew Macphail, on Our Canadian Speech; Nov. 28—Douglas Clarke, M.A., Dean of the Faculty of Music; Dec. 2—Professor F. E. Lloyd, President of the Royal Society of Canada, on Scientific Movies; Dec. 5—The Hon. Cyrus MacMillan, Chairman of the Department of English, McGill University; Dec. 9—Professor Ramsay Traquair, on Old Architects of Quebec; Dec. 12—Mr. Edmund Collard.

Subsequent to mid-December, the addresses so far arranged are: Dec. 16—Professor N. N. Evans, on McGill Fifty Years Ago; Dec. 19—Dr. A. G. Fleming, on The University and Public Health.

Alumnae Notes

FEDERATION SCHOLARSHIPS.—A number of fellowships and scholarships, enabling holders to carry on research or postgraduate work in various countries, are open to members of the associations belonging to the International Federation of University Women. Information about these may be had from Miss Laila C. Scott, Trinity College, Toronto.

Applications for the Travelling Scholarship of $1250, offered by the Canadian Federation of University Women, and open to any woman holding a degree from a Canadian University, should reach the Convenor of the Scholarship Committee, Dr. A. Vibert Douglas, McGill University, not later than February 1, 1933.

ALUMNAE SCHOLARSHIP COMMITTEE.—The Committe on Endowments and Loans, of the McGill Alumae Society, is planning a special effort this session, with the co-operation of the secretaries of the various years, to interest each class of graduates in adding to its fund for the maintenance of scholarships and loans to promising students attending McGill. The scholarship of $50, raised last session by the Class of 1904, has been awarded to Miss Dorothy Denton, Arts '36, who entered the University from the Montreal High School for Girls with an exceptionally fine student record. Mrs. G. St. G. Sproule, President of the Alumnae Society, is Treasurer of this Committee.

McGill's representation at the conference of the International Federation of University Women, held in Edinburgh, during the past summer, consisted of Miss Hazel Murchison, voting delegate of the McGill Alumae Society; Miss Helen McEwen, attending as Treasurer of the Canadian Federation; Mrs. Walter Vaughan; and Miss Muriel Gillean. Madame Puech-Milhau, honorary graduate of McGill, was extremely prominent in the French section. Canada was represented by 25 members, a larger delegation than at any previous conference.

At McGill's October Convocation, Miss Dorothy Hewitt and Miss Ida Rabiner were granted the degree of B.A. Miss Elizabeth Rhoda Grant (B.A., M.A., McGill) and Miss Margaret Greig (B.A., McGill; M.A., University of Saskatchewan) were awarded the degree of Ph.D.

After spending the autumn at the University Women's Club in Montreal, Miss Hurlbatt sailed at the beginning of November for England, where she will spend the winter.

1909: Mrs. J. G. Penning (Gertrude Schafheitlin, B.Sc.) after spending the summer in Germany, has taken up residence in Orange City, Iowa.

1911: Miss Anna Schafheitlin (Ph.D., Wisconsin) is now on the staff of Kent State College, Kent, Ohio.

1925: Miss Alice Bissett, M.A., is spending the winter in London, England, engaged in studies in history.

1929: Miss Ida C. Greaves (M.A. '31) has been granted a two-year studentship at the London School of Economics, affording her an opportunity of completing work for a Ph.D. degree.

1930: Miss Isabel Rowat is teaching French at the Murray Park School, in Montreal.
Miss Celeste Belnap is attending the McGill Library School.
Miss Dorothy Bell has a position in the McGill Library.
Miss Katherine Stanfield is spending the winter in Montreal.

1932: Graduates of this year are now engaged as follows:
Miss Helga Tait has been awarded the Banting Fellowship at Toronto University.
Post-Graduate Courses: at McGill, H. Adele Alguire, Carol Bean, Margaret Dodds, Alice Parker, Anne Rowley, and Estelle Blumenthal (also on the staff of the English Department); at Toronto, M. Elizabeth Dike, and Christine Graham; at the Sorbonne, Paris, Anne Marie DuBois.
Studying Law: Rona Bronfman.
Studying Medicine: Josephine Schacher, and Mabel Howie.

At the McGill Library School: Margaret Allen.

Teaching: Wenonah Beswick, Florence Brennan, Margaret Dykes, Margaret Essery, Doreen Harvey-Jellie, Beatrice Kaplan, Thelma Mitchell, Janet Morrison, Dorothy Nesbitt, E. R. Dora Smith, Isabel Townsend, Rose Kahalan, Esther Zuker.

Training as a Nurse: Margaret Harrington.

Holding Business Positions: Mildred Ball, Alma Johnson, Ruth Granger.

Business Courses: Flora Aikin, Eloise Ilsey, Edith Neal, Ellen Read, Merle Peden, Margaret Jeffrey.

Married: Jean Campbell, Jessie M. Henderson, Anna Tritt.

At Home: W. Marion Harris, Nancy Johnson, H. Katherine McCaffrey, Anne E. MacNaughton, Mary Taggart, Kathleen Warren, Marjorie Wass.

Information about other members of the class will be appreciated.

Deaths

BOYLE, DR. ALBERT DESBRISEY, Med. '77, at Medford, Mass., September 4, 1932.

CARLYLE, RUSSELL AUBREY, past student, in Winnipeg, Man., October 25, 1932.

DAVIDSON, DR. EDGAR ALAN, Med. '94, at St. Albans', Vermont, October 26, 1932.

EVANS, DR. EDWARD, Med. '87, at Lacrosse, Wisconsin, June 1, 1932.

FAIRBAIRN, JAMES FREDERICK ROGER, past student, Arts 1891-'94, in London, Ont., October 13, 1932.

GIROUARD, ARTHUR, K.C., Law '07, at Thetford Mines, P.Q., in September, 1932.

GUERIN, DR. JAMES JOHN EDMUND, Med. '78, in Montreal, November 10, 1932.

HOWARD, DR. HARVEY, JR., Med. '32, at Elmira, N.Y., September 28, 1932.

KENDALL, DR. CARSON J., Med. '16, in Ottawa, October 19, 1932.

LAUTERMAN, DR. MAXWELL, Med. '95, in Montreal, September 27, 1932.

LOCKERBY, R. A., past student in Applied Science, in Montreal, November 17, 1932.

MARTIN, ALFRED W., Arts '82, in New York City, October 14, 1932.

McCUAIG, DR. JAMES, Med. '86, in Los Angeles, Cal., August 29, 1932.

McCUAIG, EDMUND BARTON, Arts '27, in New York City, August 24, 1932.

McLEAN, ANGUS ETHELBERT, past student, Arts '15, in Bathurst, N.B., November 17, 1932.

NOBLE, DR. CHARLES, past student, Med. '53-'55, at Sutton, Ont., on November 13, 1932, aged 101 years.

PATTERSON, MR. JUSTICE WILLIAM, Arts '86, M.A. '89, Law '95, in Montreal, November 11, 1932.

PERODEAU, THE HONOURABLE NARCISSE, Law '76, in Montreal, November 18, 1932.

ROBERTSON, DR. EDWARD ARCHIBALD, Med. '91, in Westmount, P.Q., October 20, 1932.

SHERATON, ROBERT LEONARD, past student, at Newtonville, Mass., September 2, 1932.

SHERK, DR. GEORGE, Med. '65, at Cheapside, Ont., August 27, 1932.

TRACY, DR. A. W., Vet. '93, in Sherbrooke, P.Q., October 26, 1932.

WILLIAMS, DR. CYRIL STANLEY, Med. '06, at Trail, B.C., September 12, 1932.

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Marriages

ADAMS-MacKINNON—At Chambly Canton, P.Q., on October 20, Miss Josepha Bowman MacKinnon, Arts '30, and Eric George Adams, Sci. '29.

ASHDOWN—At Blythe, Ont., in August, Miss Annie Taylor and Rev. Charles Roland Ashdown, Ph.D., Arts '97.

BOSWELL—At Montreal West, on September 24, Miss Margaret Louise Field and Dr. Henry A. Boswell, Med. '31, of New York City.

BROCKWAY—On October 28, Miss Katherine A. Brockway, Arts '32, and Reed Le Bourveau, of Montpelier, Vt.

CAMPBELL—In Ottawa, in September, Miss Jean G. Campbell, Arts '32, and William Argue, of Fredericton, N.B.

CANTLON—In Montreal, in July, Miss Phyllis Mabel Lee and William Norman Cantlon, Sci. '30, of Montreal.

COLBY—In Montreal, on September 24, Miss Lucy F. Colby, past student, and James Crandall, of Toronto.

COLLINS-WHITE—In Montreal, on September 3, Miss Elsie M. White, L.Mus. '29, and Thomas Garnet Collins, Sci. '31.

DESBARATS-RETTIE—In Montreal, on October 5, Miss Margaret Ogston Rettie, Arts '30, and Hullett Desbarats, Arts '29.

DUNN—In Montreal, on September 17, Miss Cicely Gordon Lithgow Caron and Dr. Arthur Frederick Dunn, Med. '30, of Ottawa.

EARDLEY—In Ottawa, on September 3, Miss Rilla Catherine Broadhead and Eric Allworth Eardley, past student of, Montreal.

FAULKNER—In Montreal, on August 5, Miss Cecil Elizabeth Baird and George Vermilyea Faulkner, Arts '30, son of Dr. Albert Faulkner, Med. '04, of Belleville, Ont.

HENDERSON—In Montreal, on October 6, Miss Jessie M. (Betty) Henderson, Arts '32, and William W. Roy.

HILL—In September, Miss Emily Richardson, and Dr. Nicholas Parsell Hill, Med. '26, of St. Catharines, Ont.

HOWARD—At Oxford, England, on October 1, Miss H. Jane Howard, Arts '29, and Christopher Lenwood Bryson.

LATTONI—In Montreal, on July 18, Miss Lucille Villani and Mario E. Lattoni, Law '24.

LESTER—In Montreal, on August 11, Miss Thelma C. Candlish and Rev. Harold G. Lester, B.D., Arts '29, of Montreal.

MANSON-GILLIES—At Brockville, Ont., on October 1, Miss Margaret Gillies, Arts '31, and Alexander Manson, Sci. '30, of Ottawa.

McCABE—In Montreal, on September 1, Miss Lucienne Brunet, of Montreal, and Dr. Aberdeen McCabe, Dent. '28, of Valleyfield, Que.

McCONNELL—In Montreal, on October 12, Miss Marjorie Vivian Wallis and Wilson Griffith McConnell, Sci. '32, of Montreal.

MINNES—In Ottawa, on September 6, Miss Anne Elizabeth MacCarthy, daughter of Dr. G. S. MacCarthy, Med. '94, and Robert Cortlandt Minnes, Sci. '28.

MIRABILE-MACLEAN—In Montreal, on June 2, Dr. E. Margaret Maclean, Med. '30, and Dr. Charles S. Mirabile, Med. '30.

MOORE—In Montreal, on October 15, Miss Kathleen Margaret Middleton and Meredith Henderson Moore, Sci. '26, of Drummondville, Que.

MORGAN—In Montreal, Miss Ivy Hicks and George Senkler Morgan, Med. '24, of Montreal.

MORTON—In Ottawa, on September 17, Miss Millicent Grace Hirsch and Dr. John White Morton, Dent. '29, of Montreal.

MUNROE—In New York City, on October 8, Miss Marjorie Ellen Dobie and David Climie Munroe, Arts '29, of Montreal.

MURRAY—In Milan, P.Q., on September 14, Miss A. Mary Murray, Arts '24, and T. J. Watson, B.A., of Woodlands, Ont.

O'HALLORAN—In Quebec, on September 10, Miss Barbara Holland Stephens and James O'Halloran, Sci. '21, son of George F. O'Halloran, Arts '83, Law '85, of Ottawa.

PEAT—In Moncton, N.B., in August, Miss Frances Peat, past student, and George McAvity, of Saint John, N.B.

PEERS—FANJOY—At New Glasgow, N.S., on November 2, Miss Ada Lillian Fanjoy, B.H.S. '29, and Dr. James Hallett Peers, Med. '31.

PIPER—In Montreal, in September, Miss Charlotte Isabelle Toombs and Richard L. Piper, Sci. '31.

TAGGART-SHARPE—In Montreal, Miss Frances Sharpe, past student, and McKay Taggart, Sci. '30.

TAYLOR—In Moose Jaw, Sask., on September 14, Miss Mary C. Battel and George E. S. Taylor, Com. '31.

WETMORE—At Waltham Abbey, Essex, England, on August 7, Miss Katherine Stewart Wetmore, Arts '29, and Elwyn E. Carter, Truro, N.S.

Personals

(*Continued from Page 55*)

DR. DONALD E. TINKESS, Med. '26, has opened an office in Greenwich Towers, Greenwich, Conn., after 21 months as an interne in the New York Eye and Ear Infirmary, preceded by three and a half years as the holder of a fellowship at the Mayo Clinic, Rochester, Minn.

DR. H. A. QUACKENBUSH, Med. '27, was a member of an expedition formed at Nassau to go to the relief of the population of Abaco Island, swept by a storm and tidal wave in September.

MISS H. HYACINTHE LAMBART, Arts '30, of Ottawa, went to the Hague recently as the first Canadian delegate to the annual conference of the Federation Aeronautique Internationale, a body controlling sport and competitive flying for 30 countries. Miss Lambart is attached to the secretariat of the Canadian Flying Clubs Association in Ottawa.

H. CARL GOLDENBERG, M.A., Arts '28, Law '32, has become associated with the Montreal law firm of Jacobs, Phillips and Sperber.

GORDON R. McGREGOR, past student, has been appointed manager of the Kingston, Ont., district of the Bell Telephone Co. of Canada.

REV. W. H. H. NORMAN and Mrs. Norman (Gwen R. P. Roberts, M.A., Arts '29) have taken up evangelistic work in Japan under the auspices of the United Church of Canada.

W. E. POOLE, past student, has been appointed district supervisor of the London Life Insurance Co. for the Annapolis Valley, Nova Scotia, with headquarters at Wolfville.

A. WELLS COATES, Ph.D., past student, designed the news, effects, productions, and dramatic control studios in the new Broadcasting House in London.

A McGill Conspectus

(*Continued from Page 53*)

McGILL DINNER IN LONDON

Recently, the *McGill Daily* has noted, a McGill dinner in London, England, drew together Professor John Culliton, of the Economics Department; Munroe Bourne and David Lewis, Rhodes Scholars; Donald Blair and Campbell Merrett, Quebec Provincial Scholarship holders in Architecture; George Nicholls, holder of a Macdonald Travelling Scholarship (law); Ken Baker, holder of a Guy Drummond Scholarship (Arts); Robert Picard, I.O.D.E. Overseas Scholar; and Graham Gore, B.Sc. '27, exchange teacher at Chatham. After dinner, the McGill men, with one associate from the University of Toronto, proceeded to the theatre.

ECLIPSE EXHIBIT

Though McGill's scientific parties shared the widespread misfortune of clouded skies and an obscured sun during the total eclipse on August 31 and were unable to secure photographs of their own, their interest in the results achieved by other parties led Dr. G. R. Lomer, University Librarian, to present in the Redpath Library

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an exhibit of all the successful photographs that could be gathered, together with eclipse documentation of an interesting and varied order. Photographs of previous eclipses were also included, so that the advantages arising from opportunity to make comparisons might be afforded.

DR. HANFORD McKEE PRESIDES

Under the presidency of Dr. Hanford S. McKee, Clinical Professor of Ophthalmology at McGill, the American Academy of Ophthalmology and Otolaryngology held its annual meeting in Montreal in September. In an address to the Teachers' Section of the gathering, Dean C. F. Martin paid tribute to the late Dr. Frank Buller and Dr. H. S. Birkett, who, in ophthalmology and otolaryngology respectively, had accomplished work so creditable to McGill. In commenting on the modern demand for specialists, Dr. Martin emphasized that, if divorced from complete clinical investigation, specialties are bad in principle and dangerous in practice. Therefore, at McGill, emphasis was placed upon the three major subjects, medicine, surgery, and obstetrics, though adequate opportunity for specialized study and investigation was a recognized feature of the University's courses.

DRUMMONDVILLE LECTURES

Among the more important lectures being delivered outside Montreal this winter, under the auspices of the Department of Extra-Mural Relations, is the series booked for Drummondville, P.Q. A number of the series will have been delivered when this issue of *The News* appears; subsequent bookings include the following: Jan. 19, Dr. A. V. Douglas, on "Time Clocks and the Calendar"; Feb. 9, Dr. W. H. Barnes, on "Hidden Mysteries of Nature as Revealed by X-Rays"; March 2, Dr. W. D. Tait, on "Psychology and Industry"; March 23, Professor Caldwell, on "Half a Lifetime in the Old World and Half a Lifetime in the New."

PRE-FOOTBALL DINNER

Dr. Stephen Leacock was the guest of honour on November 4, at a dinner in the Windsor Hotel, organized by the Montreal Branch of the Graduates' Society and attended, under the chairmanship of S. B. Millen, by some 160 graduates of the years 1926-'30. Dr. Leacock announced that the taxi-driver had stolen his prepared speech and proceeded in the humorous vein that has won him distinction throughout the English-speaking world, in a degree rivalled only by his attainment in the field of economics. This speech, in conjunction with other entertainment, provided the basis for an evening which those present most highly enjoyed.

THE CHEMISTRY OF STARCH

Previous to his formal appearance in Montreal, Sir James Irvine delivered a technical address in the Macdonald Chemistry Building, McGill University, and described in part the important research he had been

conducting for many years in the chemistry of starch. This branch of chemical study, he pointed out, was of vital importance for a number of reasons, not least the value of knowledge gained and applicable in medicine. After his address, Sir James was the guest of honour at a dinner held by the St. Andrew's University Graduates' Club of Montreal in the Windsor Hotel.

AKPATOK ISLAND

A year ago *The McGill News* presented an article by Alfred Langley on the Oxford University Exploration Club's expedition to Akpatok Island, the mystery island of Ungava Bay. A full report of this expedition recently appeared in the *Royal Geographical Society Journal* and abundantly confirmed the belief that the Oxford Club had accomplished work of a high order. As a result, the island has shrunk to one-half the size shown on existing charts. This casts doubt on the accuracy of the charts in regard to other islands near Hudson Strait and suggests that further careful surveys in these northern waters would yield results of great value.

McGILL EXHIBIT IN LONDON

An exhibit sponsored by the Faculty of Medicine and arranged by Dr. Maude Abbott, Curator of the University's Medical Museum, attracted commendation at the Centenary Meeting of the British Medical Association in London last summer. This pathological exhibit presented the results of autopsies in 1,000 cases of congenital heart disease. An article and photographs relating to the exhibit, it was stated, would appear in the *British Medical Association Journal*.

SURVEY OF GEOLOGY GRADUATES

A survey of McGill's geology graduates provides some interesting statistics. The total of geology graduates is 83, of whom 18 graduated prior to 1900, 18 in the following twenty years, and 47 in the period from 1920 to 1930. Of these, 41 reside in Canada, 1 in Newfoundland, 11 in the United States, 1 in Mexico, and 8 in Rhodesia. The whereabouts of 3 is unknown, and 18 have died. Two of the graduates have been Chief Geologists of the Dominion Geological Survey; 2 have been Canadian Deputy Minister of Mines; 3 have been Provincial Mineralogist of British Columbia; one has been Mineralogist of the Province of Quebec; and one is Director of the Quebec Bureau of Mines.

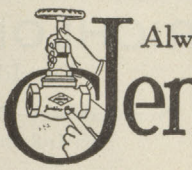
FISH CULTURE

Under the direction of Bertram W. Taylor, the branch of the Province of Quebec Department of Colonization, Game, and Fisheries devoted to fish culture and housed in the Biological Building, McGill University, has recently accomplished work of a high order. Salmon hatcheries are maintained at Tadoussac and Gaspé; and trout hatcheries or rearing stations at Baldwin's Mills, St. Alexis, Magog, Mont Tremblant, and Ste. Agathe des Monts. Benefit to fishing for salmon and for brook grey, and rainbow trout through the work of these stations is increasing markedly each year.

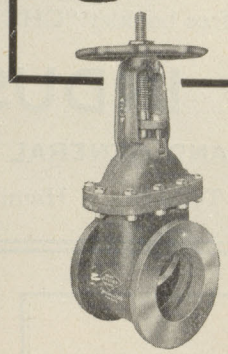
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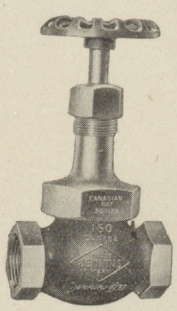
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VOLUME 14 MARCH, 1933 NUMBER 2

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CANADIAN PACIFIC

SOMETHING DOING EVERY DAY!

May Attractions . . .

BRITISH ISLES—The London Season opens—Royal Academy Art Exhibition, London (Burlington House)—Chelsea Flower Show, London—Golf. Open Championship, St. Andrews, beginning May 22nd.—Opening of Royal Naval, Military and Air Force Tournament, London (Olympia)—"Eights" Week, Oxford.

FRANCE—Spring style shows in Paris—All winter shows still running—Racing at Vinecures.

GERMANY—Brahms Centennial Festival opens at Wurzburg—Wagner Year Concerts.

ITALY—International Exhibition of Modern Art at Milan—Fête of "Calcio" at Florence—Vienna Philharmonic Orchestra at the Augusteo, Rome—Royal Grand Prix Auto Race in Rome.

CZECHOSLOVAKIA—Napoleonic Congress at Prague—International Students' Lawn Tennis Tournament at Prague.

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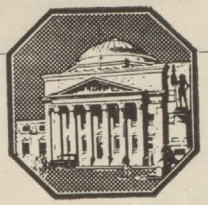
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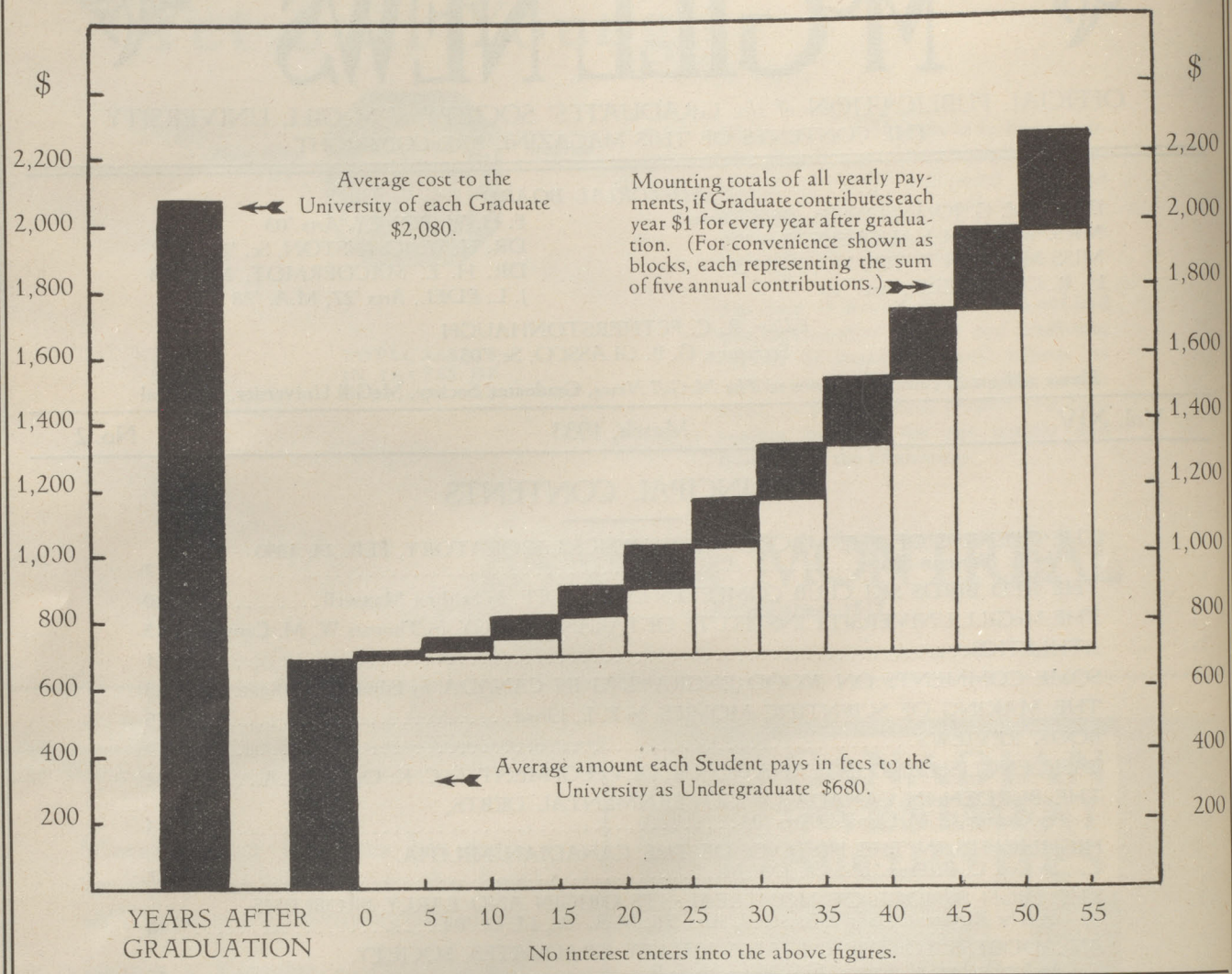
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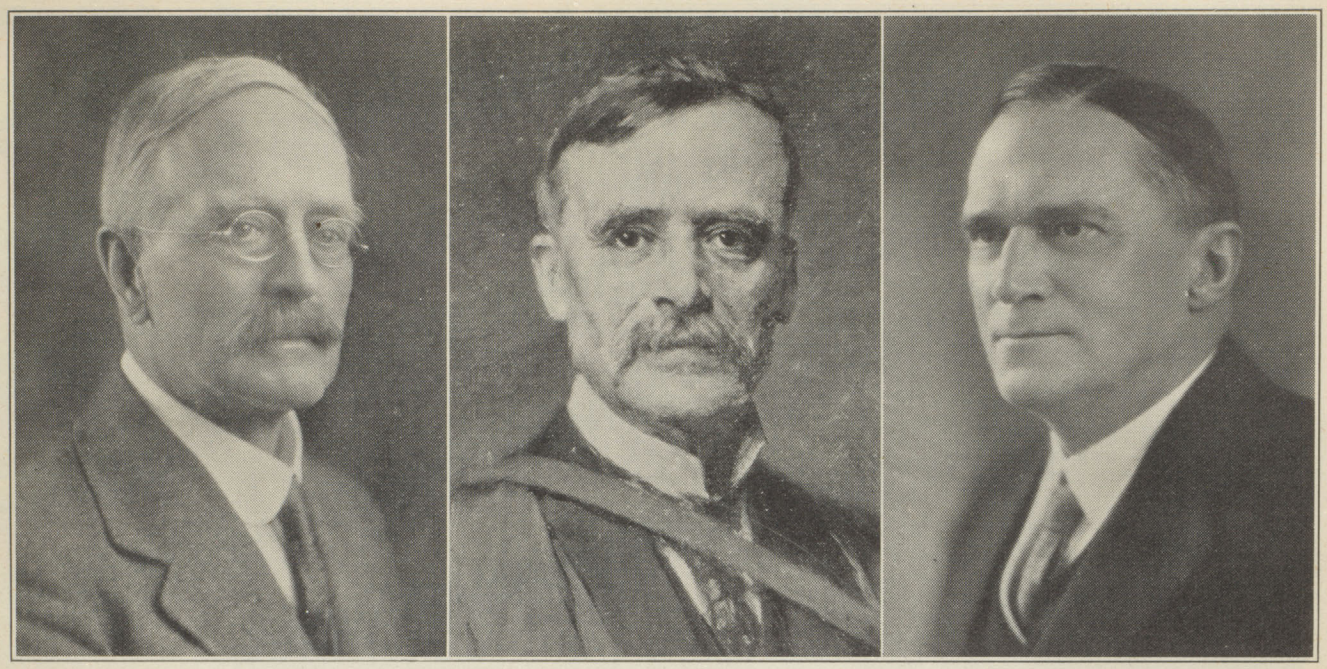


No interest enters into the above figures.

EACH student in the University is contributing in fees only one-third of the cost of his education, and the other two-thirds is being provided from the capital resources of the University, which have been donated in the past in the form of endowments for buildings, professors' chairs, general purposes, etc. The financial statements of the University show that the average student who has been four years at college has cost the University $2,080 for his education; and he has benefitted by expenditures on him in excess of the amount he has paid in fees by about $1,400. This financial benefit is increasingly greater to those who take courses requiring more than four years at college, such as Medicine, Law and Engineering.

The above chart is designed to show this financial obligation of each graduate to the University and how it may be discharged by making annual contributions to the Graduates' Endowment Fund. When this Fund was started ten years ago, it was suggested that graduates might each subscribe annually a sum amounting to $1.00 a year for each year after graduation; and the chart shows that the average graduate of a course of four years at college would pay back his cost of education to the University about fifty-two years after graduation, if he were one of those who fortunately would live to such a ripe old age. This chart also explains the purposes of those who, ten years ago, suggested this scale of subscriptions to the Graduates' Endowment Fund; and this may be valuable to many graduates who unfortunately did not understand the object of this proposed scale of subscriptions, even though explanatory circular letters were sent out from year to year.

The Endowment Fund Committee wishes all graduates to know that it welcomes any amount subscribed to the Fund, for it realizes that it is of more benefit to the University to receive small subscriptions from all the graduates, than to get large subscriptions from a few. For the past few years, the Endowment Fund Committee has not made its annual appeal to the graduates for subscriptions to the Graduates' Endowment Fund, on account of general economic conditions; but it is desired that the principles on which the Fund was founded should be kept before the graduate body.



DIRECTORS OF THE PHYSICS DEPARTMENT, McGILL UNIVERSITY, 1890-1933

Dr. A. S. Eve, 1919 to the present time. Professor John Cox, 1890-1909. Professor Howard T. Barnes, 1909-1919.

The Opening of the Macdonald Physics Laboratory, February 24, 1893

By A. NORMAN SHAW

THE twenty-fourth of February, 1933, marked the fortieth anniversary of the formal opening of the Macdonald Physics Laboratory. The Macdonald Engineering Building, opened at the same time, was burned in 1907, and the north-east Workman wing, though saved, was changed and enlarged when the present main building was constructed. The Physics building, on the other hand, stands substantially the same as when it was built forty years ago. It narrowly escaped in December, 1924, when $20,000 damages were caused by a fire which started in the Optics laboratory; but the only changes in construction since 1893 consist of: the rebuilding of the front entrance in 1927 on account of subsidence in the treacherous clay underlying part of its foundation; the rearrangement of a few interior partitions; and the fitting and equipment of attic and basement in attempts to cope with the serious crowding arising from the expansion of staff, students, and research.

The programme of the original opening ceremonies is of some interest in view of this fortieth anniversary. Although quite an ordinary pamphlet, it refers to a few simple historic items which may be forgotten, if left unrecorded.

At ten o'clock in the morning on February 24, 1893, at the Engineering Building, Sir Donald A. Smith (later Lord Strathcona), Chancellor of the University, presented an address from the Governors, Principal, and Fellows to His Excellency Lord Stanley of Preston, G.C.B., Governor-General of Canada. The need for engineers in the land and the importance of scientific investigation were the topics of numerous addresses, and many glowing predictions were made.

The provision of the splendid engineering building, far surpassing anything in Canada at that time, just when the country was about to enter upon its remarkable period of industrial development and continuous demand for able engineers, constitutes one of the most striking



MACDONALD PHYSICS LABORATORY: STAFF AND RESEARCH STUDENTS, 1907-08

Third Row, Left to Right: Dr. R. W. Boyle. L. LeGrow. S. Podville. R. Lawrence. G. Dunn.
Second Row: Dr. H. T. Barnes. Dr. G. Rümelin. Dr. H. Bronson.
Prof. J. Cox (Director). Prof. E. Rutherford. Dr. R. K. McClung. Dr. A. S. Eve.

examples of the great national value of investments of this kind.

The Physics laboratory, planned more specifically with reference to the development of fundamental researches, was exceptional in being entirely non-magnetic in construction, and contained other advantages which were then almost unique. The activities in this well-equipped building commenced immediately to play a leading part in turning the attention of Canadians, almost for the first time, to the problems of pure science. The early investigations during the directorship of the late Professor John Cox were initiated and guided first by H. L. Callendar and then by Ernest Rutherford (now Lord Rutherford). Their prolific work made a record of achievement and inspiration to others which has been rarely equalled in any institution*; and in less than five years it gained for McGill a high reputation throughout the physical laboratories of the world, fulfilling some of the hopes and prophecies of the addresses on the day of inauguration.

*A further review of this work and an enumeration of many subsequent investigations are given by the present writer in "An Account of the Progress of Physics in Canada," Presidential Address Sect. III, Royal Society of Canada, in the Anniversary Volume, "Fifty Years Retrospect" pp. 91-105.

An interesting feature of the morning ceremonies on the opening day consisted of the presentation of the keys of the buildings to Lord Stanley by Mr. William C. Macdonald (later Sir William), that far-sighted and generous benefactor who continued to do so much for McGill and education in Canada for many years, giving in all $13,222,891.92 to our University. The key of the Engineering building was made from the first metal tested in the Engineering workshop, and both keys were placed in a box made of teak from the *S.S. Beaver*, the first steamship to round Cape Horn.

The undergraduates also presented an address to the Governor General; and after Lord Stanley replied and other speeches had been delivered, the vice-regal party and guests proceeded on a tour of inspection.

In the afternoon at four o'clock in the Physics lecture theatre, there were more addresses in acknowledgment of the gifts and in explanation of the laboratories and their purposes. After inspection of the apparatus, which was exceptionally elaborate and complete, tea was held in the elementary laboratory and the guests were entertained by songs from the students.

In the evening a formal reception was held at eight o'clock, and the entire buildings were open for inspection, with special demonstrations and experiments in the laboratories and workshops, Refreshments were served from eight to eleven-thirty, and the students' Glee Club gave performances at nine-fifteen and ten o'clock in the reception room of the Engineering building.

The transformation since those days, when about 140 undergraduates and 3 graduates used the Physics laboratory per annum, to numbers exceeding 500 undergraduates and 15 graduates, with an increase from 2 senior professors and a junior staff of 3, to the present staff of 7 senior, associate, and assistant professors, with 6 lecturers and demonstrators, far exceeds the predictions of the designers. It indicates clearly that the old Macdonald Physics Laboratory can no longer provide every student of research with the laboratory space and special conditions which, in addition to the obvious requirement of ability, are essential for the maximum output of original work and its fruition. The crowded lecture theatre and overflowing elementary laboratories are a great testimony to the utilization of the building, but the quality of the undergraduate work and the degree of personal contact between professor and student are necessarily weakened by the congestion.

It is hoped that some future benefactors will assess the fundamental values of Sir William Macdonald's magnificent endowment of education and research. After weighing the achievements of those who owe their training to these laboratories, and after reviewing the long record of discovery and gauging its influence in the scientific life of the nation, they may, with possibly added assurance, adopt the vision and the practice of those illustrious patrons who first enabled McGill University to develop. Perhaps, indeed, we may look forward in better times to another occasion such as this brief article recalls.



MACDONALD PHYSICS LABORATORY: STAFF AND RESEARCH STUDENTS, 1932-33

Inset: W. H. Watson. *Inset:* L. V. King.

Fourth Row: F. R. Terroux. R. N. Haslam. J. T. Henderson. W. H. White. P. E. Aikman. K. Evelyn. A. Wendling. A. J. Cipriani.

Third Row: H. Lane. I. W. Lawson. B. Brown. A. H. Snell. W. B. Ross. G. V. Helwig. J. Katzman. G. Tweedcale.

Second Row: S. Amesse. R. L. Thornton. K. Dunn. H. T. Pye. E. Taylor. F. Morgan. L. Smith. S. Giles.

Front Row: H. G. I. Watson. J. S. Foster. A. N. Shaw. A. S. Eve (Director). D. A. Keys. H. E. Reilley. A. V. Douglas.

The Red Birds Ski Club Competes in Europe*

By STIRLING MAXWELL
(President of the Club)

A FIVE MAN undergraduate ski team, composed of Jack Houghton, Frank Campbell, Bill Ball, Walter Dorken and Peter Renold, representing McGill University, sailed from St. John, N.B., on the S.S. *Duchess of Atholl* on December 15th last. The trip was conducted by the Red Birds Ski Club and was made possible by contributions from the members of the team, the R. B. S. C., the generosity of certain Montreal sportsmen and Alexander Keiller, past president of the Ski Club of Great Britain. The object of the trip was to repay the visit of the Oxford and Cambridge ski teams who came to Canada a year ago, by competing against their combined team at St. Moritz, Switzerland, and also to participate in the International University ski meet which was being held at the same place from the 5th to 8th of January. Four graduates, including the president and vice-president of the Red Birds, accompanied the team, the party being in charge of Stirling Maxwell, who was assisted by Fred Taylor. Harry Pangman, Olympic runner, was appointed honorary coach in charge of cross-country and George Jost took charge of the slalom training.

Most of us prefer to forget the details of the voyage across, it being typical of the worst kind of winter crossing. We landed at Greenock on December 23 and travelled the length of England and half way across Europe in two days and a night with barely an hour's sleep, and the state of the weather had prevented any rest for a considerable time before landing at Greenock. Some one calculated seven hours sleep in the past seventy and I don't think they were far wrong. It would be hard to imagine a wearier, dirtier, more haggard lot of unshaven hoboes who rubbed their eyes and yawned as the train ground to a stop at St. Moritz—at last our destination—now for bed and about three days' sleep.

All of a sudden there was a crash of cymbals and a terrific din from the platform as a full-grown brass band struck up, and looking out we saw that the platform was alive with people, all yelling and dancing around like crazy men. The entire Oxford and Cambridge contingent, having dined exceedingly well, had donned ski boots with dinner jackets and raced down the hill in wild disorder carrying torches, roman candles, and fireworks. This was our welcome—one fit for a king. We were herded out, looking very stupid and dazed, paraded before a photographer, and piled into a sleigh resembling very much the Montreal "round-the-mountain" variety of street car with rising tiers of seats, except that this one was piled high with buffalo robes, garlanded with great bands of flowers and drawn by four fiery steeds. The parade was on, the brass band, the "Santa Claus" sleigh, the howling mob, torches, roman candles, fire works, and Alex Keiller, strongly suspected of instigating the whole thing, having the time of his life. Up and up through the village we wound as amazed villagers stood open-mouthed and old ladies in night attire threw up their windows to see what was causing the infernal commotion. We drew up in front of the Hotel Kulm and having forced a McGill yell from our weary lungs, shook hands with Herr Janssen, the genial proprietor, and took shelter in the interior of his hospitable establishment.

The Canadians had arrived and all St. Moritz knew about it.

The management of the Kulm tendered a dinner to Oxford, Cambridge, and McGill on Christmas night, at which we were formally welcomed to St. Moritz by Mr. Janssen and Mr. Keiller, and being a holiday the process of getting acquainted was carried far into the night.

St. Moritz is more than 6,000 feet above sea level and as everyone was affected by the rare atmosphere and weary from travel, we kept off our skis for forty-eight hours, getting acclimatized by strolling around the village on foot. On the third day an easy slalom practice was held, followed the next day by a tour around the Oxford-Cambridge langlauf course, after which training began in earnest. Several of us had the privilege of going down the bob-sleigh run, and a very thrilling experience it was. On December 30th the 3S Club held an "unseen slalom" which differs from the conventional race inasmuch as competitors are started from the top without



RED BIRDS SKI CLUB AT ST. MORITZ, SWITZERLAND, JANUARY, 1933

Reading Left to Right:

Jack Houghton — Capt., McGill Undergraduates Ski Team
Frank Campbell
George Jost
Fred Taylor
Alex Keiller — Past President, Ski Club of Great Britain, and Hon. Member Red Birds Ski Club.
Sterling Maxwell — Pres., Red Birds Ski Club
Harry Pangman — Vice-Pres., Red Birds Ski Club
Bill Ball
Walter Dorkin
Peter Renold

having the opportunity of studying the flags, which are concealed behind natural objects as far as possible. The team entered this for practice and made a creditable showing.

The British Langlauf Championship was held on December 31st, just five days after we had started skiing, and although the men were still in the early stages of training the five undergraduates and Pangman were entered, but were given definite instructions not to extend themselves beyond a reasonable limit. The course was a full 18 kilometres over fairly level country, rather flat in the open and relieved by climbs and descents on bush trails. The result was an overwhelming victory for Canada, four out of the first five runners being Canadians. Campbell ran a magnificent race in 1.41-59$\frac{2}{5}$ to finish ahead of Ross Wilson of the Canadian Olympic Team. Roger Bushell, running for South Africa, was third, more than four minutes behind the winner, and was closely followed by Harry Pangman and Bill Ball. F. J. Walter, England, was sixth exactly one second ahead of Jack Houghton.

The official results were:

British Langlauf Championship, St. Moritz—31st December, 1932

1.	Campbell, F. B.—Canada	1.41	59 2/5
2.	Wilson, R.—Canada	1.42	47 1/5
3.	Bushell, R. J.—South Africa	1.46	8 2/5
4.	Pangman, A. H.—Canada	1.46	39 2/5
5.	Ball, W. L.—Canada	1.47	24 1/5
6.	Walter, F. J.—England	1.50	8 2/5
7.	Houghton, J. R.—Canada	1.50	9 2/5
8.	Dunn, R. C.—England	1.50	21 2/5
9.	Dorken, R. W.—Canada	1.55	24
10.	Green, P. C.—South Africa	1.56	15 2/5
11.	Renold, P.—Canada	2.11	6 2/5
	Lang, T. F. U.—Scotland	Retired	
	Pugh, H. G. H.—England	Scratched	

The race instilled a certain amount of confidence into the team and showed that Bushell would be a more dangerous man to cope with than Walter who last year won the Oxford versus Cambridge match and was second to Campbell against McGill at St. Margarets.

As the slalom against Oxford and Cambridge was next on the programme, practice was directed to this end and a Team versus Managers race was held on January 2nd in which the Team was victorious.

Another practice slalom took place the following day and on January 4th the first event of the Oxford-Cambridge vs. McGill meet was held. The slalom course was laid out by Dr. Amstutz on the slopes of Corviglia some 2,500 feet above St. Moritz, the difference of elevation between the start and finish being roughly 350 feet with twenty pairs of flags in between.

Campbell made two flawless descents of $39\frac{4}{5}$" and $39\frac{2}{5}$" at top speed, his runs in each part being faster than any other competitor's. Green of Cambridge was second with $41\frac{2}{5}$" and 41" courses, and was followed by Chris. Taylor the Cambridge captain, Jack Houghton, McGill, Dunn and Bushell of Cambridge, Dorken and Renold of McGill, Hamilton Smith, Oxford and finally Ball of McGill, who was feeling indisposed and ran far below his usual form. Only one penalty was incurred in the entire course, the standard of skiing being high. In spite of the fairly even spacing of the members of each team the Englishmen won the race on total time, the official results being:—

McGill vs. Oxford and Cambridge Slalom

Competitor	1st Run	2nd Run	Total Time
1. F. B. Campbell (McG)	$39\frac{4}{5}$	$39\frac{2}{5}$	$79\frac{1}{5}$
2. C. P. Green (Camb.)	$41\frac{2}{5}$	41	$82\frac{2}{5}$
3. C. Taylor (Camb.)	$43\frac{2}{5}$	$39\frac{4}{5}$	$83\frac{1}{5}$
4. J. R. Houghton (McG.)	$44\frac{3}{5}$	$41\frac{2}{5}$	86
5. R. C. Dunn (Camb.)	$53\frac{4}{5}$	$42\frac{1}{5}$	96
6. R. J. Bushell (Camb.)	$44\frac{4}{5}$	$52\frac{2}{5}$	$97\frac{1}{5}$
7. R. W. Dorken (McG.)	$51\frac{2}{5}$	$54\frac{1}{5}$	$105\frac{3}{5}$
8. P. Renold (McGill)	$54\frac{3}{5}$	52 1 penalty 56	$110\frac{3}{5}$
9. P. L. Hamilton Smith (Oxford)	$55\frac{1}{5}$	$59\frac{1}{5}$	$114\frac{2}{5}$
10. W. L. Ball (McGill)	$61\frac{3}{5}$	$60\frac{2}{5}$	122

Oxford and Cambridge	100 points
McGill	94 points

A year ago in Canada we had been beaten by a matter of 12 points in this event and it is interesting to note that the lead had now been cut in half.

The following day, January 5th, the International University Meet, known as the S.A.S. got under way. Competitors were divided into three classes as follows:—

Class I. University undergraduates under the age of 26.

Class II. University graduates and students over 26 but under 32.

Class III. University graduates over the age of 32.

The downhill race, commencing on top of an Alp some 10,000 feet above sea level, descending about 2,000 feet into the valley, was the first event on the programme.

As we carried no spares, the undergraduate team was kept out of this race in order to preserve it intact for the langlauf. Pangman and Jost, however, entered in Class II. Pangman distinguished himself by coming fourth and Jost 9th in a field of 19 in their class. Actually placing 13th and 22nd respectively in a total field of 105, which was quite remarkable considering the importance of the event and our limited experience in downhill racing.

On Friday morning, January 6th, the S.A.S. langlauf was run off over an 18 kilometre course. The Oxford-Cambridge vs. McGill race was combined with it, as it was not considered advisable to hold another cross-country race within the very limited time at our disposal.

The wisdom of our decision to keep the undergraduates out of the downhill was demonstrated when Pugh of Cambridge injured his wrist and Walter of Oxford sprained an ankle on the high slopes. Neither was able to compete in the langlauf and as the English had no further reserves, we agreed to race only a four-man team. Pangman easily won Class II by a margin of five minutes over his nearest rival in 1.16 44 and was fourth out of the total field of 53. Campbell placed 8th in Class I in a field of 44, Ball was 11th, Dorken 18th, Houghton 21st, and Renold 37th.

The Oxford-Cambridge vs. McGill results were as follows:—

1. Campbell—McGill	1.18.30
2. Ball—McGill	1.20.52
3. Dunn—Cambridge	1.21.34
4. Bushell—Cambridge	1.22.12
5. Dorken—McGill	1.24.19
6. Houghton—McGill	1.26.36
7. Weaver—Cambridge	1.32.09
8. Green—Cambridge	1.34.13

McGill	100 points
Oxford-Cambridge	94.32 points

Campbell recorded his third straight win in as many races, thus proving himself by far the most useful man on either the Oxford-Cambridge or McGill teams. Dunn of Cambridge was the

best Englishman and attributed his success to the fact that he held Pangman's pace for a few minutes when passed by him during the race.

Final results of the Oxford-Cambridge vs. McGill meet were thus:

Oxford-Cambridge	97.16%
McGill	97.00%

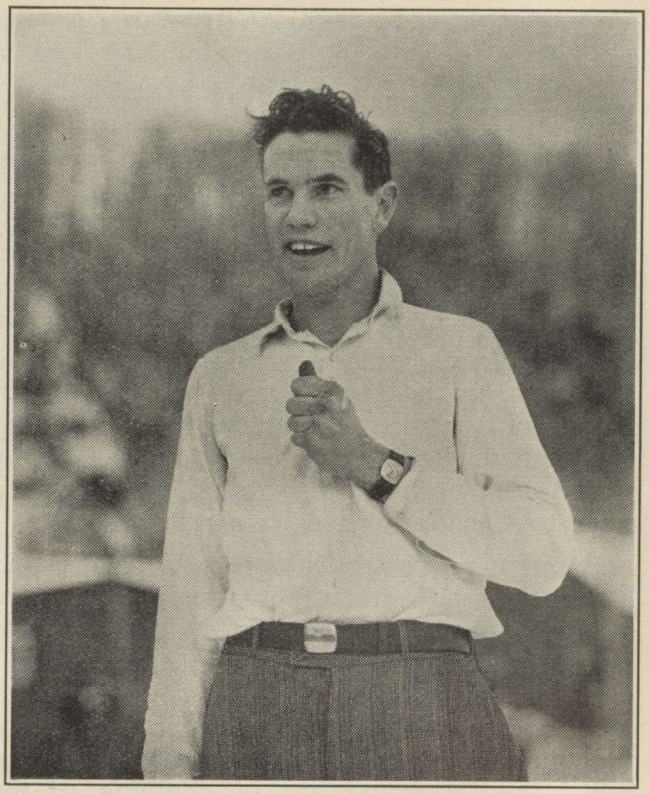
So close was the contest that it was generally believed for a while that McGill had won the meet. The illusion was cruelly dispelled, however, when the auditors went into session and the Englishmen were declared winners by a fraction of one per cent.

The series was productive of excellent sportsmanship and good feeling on both sides. McGill showed a decided improvement in the slalom and a lot of credit is due to the Englishmen for their performance in the langlauf. If we were unable to win we brought the score to a point where it might be truly said to be uncomfortably close from an Englishman's point of view.

The first thirty men in the S.A.S. downhill qualified for the slalom. Jost and Pangman came 6th and 7th respectively in Class II and 13th and 14th in the whole field.

The following day, January 7th, the relay race, the big event of the S.A.S. meet was held. In the downhill, slalom, cross-country, and jump the men competed as individuals, but here five men combined to form a team, all of whom must be undergraduates or graduates of the same University. We entered a Red Birds Team running for McGill, of three undergraduates and two graduates. Nine teams competed, two Italian, from Mailand and Turin, an Austrian from Innsbruck, two Swiss from Bern and Zurich, a Cambridge team, a Norwegian, a Jugoslavian and a Canadian, all competing for the University Championship of Europe. The start was 8,000 feet above sea level, high on the open slopes above the town. Huge mountains towered up behind to lose their peaks in the clouds. Across the valley and in all directions more mountains, treeless and glistening in the sun. Far down below a dark band marked the beginning of tree line and a thousand feet below again appeared the roofs of the seemingly toy village of St. Moritz by the side of the lake.

Nine men lined up outside the Alpina Ski Hut, gave a last look at bindings, stamped their skis, and at the starter's terse command pushed over the brow and slithered 800 feet down the valley, christied sharp left, and climbed steeply for 500 feet, over a knoll past the funicular station and then settled into a long descent of increasing steepness to the base of the flying kilometre course, here to turn north for a thousand foot climb far up the valley and a final descent to Corviglia Station. The Italian, Austrian, and Norwegian Teams soon forged into the lead as the competitors began to spread out in a line and the order of finishing at the first control was Italy, Austria, Norway, Italy, Switzerland, England, Canada, Switzerland and Jugo Slavia. Houghton was our first man and although outpaced by some of Europe's best runners, the McGill Captain ran a remarkable race, coming in in 37.51" right on Bushell's heels and a bare four minutes behind the leading Italian.



C.P.R. Photo

FRANK B. CAMPBELL

Who at St. Moritz won the British Langlauf Ski Championship of 1933, and through his notable triumphs in the events of the Oxford and Cambridge *versus* McGill Ski Competition worthily upheld McGill's athletic reputation.

Ball took over the flag and was off after Dunn the second Englishman. The course led down to Marguns, a drop of five or six hundred feet where it veered right around the Alp Laret and finished with a stiff 750 foot climb back to Corviglia Station. Dunn was overtaken and passed, but when going at top speed Ball missed the course and fell down a bank up which it was necessary to climb through deep snow. This piece of hard luck added minutes to our time and enabled Dunn to repass Ball and record the fastest time for the lap in 30.38. Ball came in, in 33.54, having fairly burnt up the remainder of the course

and passed one more man in an effort to make up for lost time.

Campbell pocketed the flag, climbed to the Alpina Hut and then ran due West along the Plateau Nair around the control post and back by almost the same route to Corviglia. The first two courses had been up and down alternately with long climbs and descents. No. 3 was comparatively level and much to Campbell's liking. Once again the championship form came forward as the distance separating the men ahead was eaten up and in a short 23 minutes and 26 seconds of extremely fast running we were pulled from 6th to 4th place as England and Norway were forced behind. The fastest lap this time went to Canada by over two minutes.

A biting north wind had now sprung up and Pangman in the familiar brown sweater was to be seen warming up at the control. His course was a straight climb almost without relief. A stiff hill at the beginning, a mile of easy upgrade, and then a ceaseless gruelling grind up into the clouds, the grade in places being steeper than a landing hill. Two thousand feet of climbing to the highest peak, comparable to Tremblant, but, in the rarified atmosphere of 10,000 feet of altitude.

Perghem of Italy held a commanding lead of 3 minutes and 35 seconds, Gallina was a minute and a half ahead and Reinl of Austria had 34 seconds to spare when Campbell romped into the enclosure and handed over the cloth. We saw them disappear over the brow and began to hope for third place.

An interminable interval of time elapsed—three quarters of an hour and still no runners. The spectators had taken refuge in the station or were stamping around to keep warm. The race was almost forgotten when suddenly over the horizon shot a little ball of red with a great cloud of snow streaming out behind. It looked like the red jacket of Austria but in a moment we saw that it was a figure not in the Arlburg but in the Red Bird crouch. The three martlets of McGill stood out prominently as Jost's red ski shirt shot across the finish line.

Pandemonium broke loose—photographers and spectators swarmed around, sweaters were piled on, till all of a sudden there was a shout from the Judges. Where was the flag? In the excitement Jost had forgotten it and was now racing hurriedly back to the finish posts to hand it over, just 45 seconds before Barassi of Italy came into view and flashed over the line.

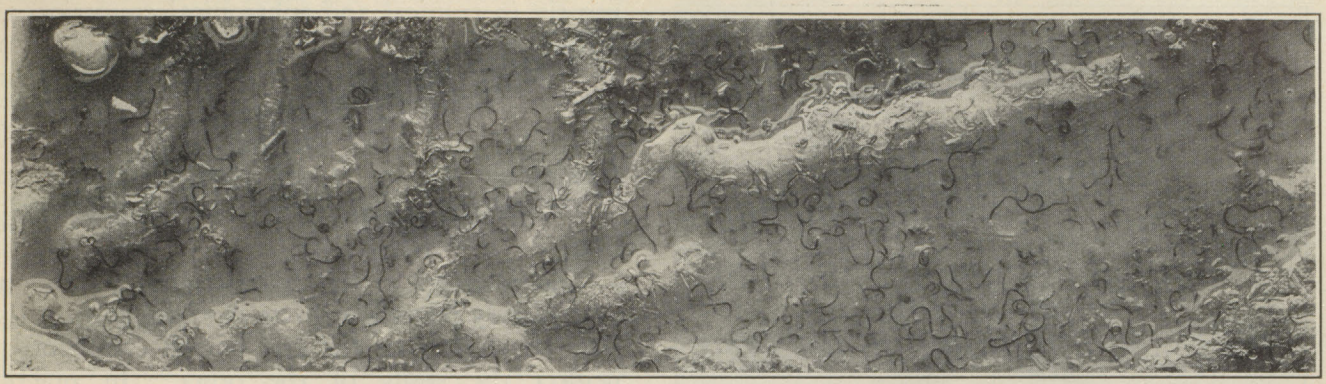
Pangman's climb will not easily be forgotten. Slowly but surely he reduced the advantage of the men ahead, passed the Austrian, and at the top after 40 minutes and 34 seconds of plugging had picked all but 25 seconds on the leading Italian and 15 on the second.

Jost took over the pennant and started in hot pursuit of the two flying figures ahead, the course being a straight descent, exactly the reverse of the previous one. At the first "shuss" a terrific slope resembling two or three landing hills piled on end the leading Italian "took it straight," the second tacked and Jost gained second place by running full out. The next drop was approached at high speed. No. 1 Italian shot over and down the hill and crumpled up in a cloud of snow at the bottom. Jost checked with a sitting christie and was passed by No. 2 Italian who also crashed at the bottom. Up in a moment, the Red Bird gained momentum, slithered down the slope to pass between his two struggling opponents and was away in the lead never to be threatened again. It was a pure exhibition of brains and nerve and provided a thrilling climax to a hard fought, gruelling race. The enthusiasm which greeted our win on all sides was all the more pleasant as we felt that we had beaten them at their own game.

This ended the competition at St. Moritz. A day's skiing on the glacier of Dia Velittza, the farewell dinner with Oxford and Cambridge, the S.A.S. Prize Giving, and a marvellous send-off will remain long in our minds as very pleasant memories. We were treated like princes during our entire stay and are deeply indebted to Mr. and Mrs. Keiller and a host of other good friends for the many kindnesses that we received at their hands. Alex Keiller has presented a very handsome cup for annual competition between Oxford-Cambridge and McGill to be known as the Laurentian-Engadine Trophy and we can only hope that it may long be competed for. We brought home the consolation prize, a smaller replica of the trophy, and expect that in the near future we will be able to exchange it for the original.

The main party returned in easy stages by Paris and London, whilst Jost and Taylor branched off for Murren. When in London we received the pleasant news that Jost had won the famous Roberts of Kandahar race. The details are now well known and it is apparent that the Red Birds have left their stamp not only in the Engadine but also in the Oberland, and the Old World's regard for Canadian skiing will not be lowered in consequence.

*From a speech delivered at the Arts Club, Montreal, January 24, 1933.



PORTION OF THE SMALL INTESTINE OF AN OX OPENED TO SHOW THE THOUSANDS OF NEMATODES PRESENT.

In the United States the loss from animal parasites is officially estimated at over $100,000,000 a year. No reliable estimate of Canadian losses is available, but it is known that they attain astounding proportions.

The McGill University Institute of Parasitology

By THOMAS W. M. CAMERON

(Research Professor of Parasitology and Director of the Institute of Parasitology, Macdonald College, McGill University.)

PARASITOLOGY is the branch of medical zoology dealing with those animals which live in, or on, other animals. Strictly speaking, the science should also include fungi and bacteria, but, with the development of bacteriology, the name has become restricted to animal parasites only. Every group of animals contains some members which have found the parasitic environment the most suitable for their own development, and the study of the forms and the devices they have adopted to gain entrance to the host, is one of the most fascinating and important branches of science. The most important animal groups, however, from the economic point of view, are the protozoa, the insects and ticks, and that heterogeneous collection of animals which we call "worms"—leeches, flukes, tapeworms and roundworms. It is with these that the new McGill University Institute of Parasitology is most intimately concerned.

Parasitology is at once the oldest and the youngest branch of medical science dealing with the causes of disease. Long before bacteria were even dreamt of, worm parasites were known and understood. In very old days, they were regarded as about equal, in the causation of disease, with the wrath of the gods—the only other known specific cause of illness. The ancient Romans actually erected an altar to the god "Verminius" in an attempt to rid southern Italy of an outbreak of parasites in their cattle. With the discovery of bacteria and protozoa, the helminths suffered eclipse, but the study of the animal parasites continued, and in recent years its true value has received recognition. It has developed in many countries both in the old and new worlds, because science is international and parasites are omnipresent. Its study in Canada, however, has been of relatively recent date and may really be said to have begun with Sir William Osler. In addition to extensive studies on various parasites both in animals and man, Sir William made fundamental discoveries both in malaria and trichinosis—an incurable worm disease, common in cold climates throughout the world and transmitted to man from pork. His discovery of the presence of numerous special white cells in the blood of patients suffering from the parasite, was one of the most important events in parasitological pathology. In 1907, Sir William Osler discussed with Sir William Macdonald the formation of a strong department of Medical Zoology (which is really the same as Parasitology) at Macdonald College and tentative arrangements were actually made for its establishment. They never materialized, however, and it was



THE PROTOZOAN PARASITE OF DOWINE

The serious disease of horses which resulted from the presence of this parasite has been eradicated from Canada through the discoveries of Dr. E. A. Watson.

not until 1932 that Sir William's cherished project became a reality. Meanwhile several important discoveries had been made in the Dominion in connection with the subject. Dr. John L. Todd, who is famous on account of his work in connection with African sleeping-sickness of man and its parasites, was appointed Professor of Parasitology at McGill University, but on his retirement some years ago his chair was left unfilled.

In the realms of research, important fundamental work was carried out in parasitology by a number of workers, and names such as Watson, A. E. Cameron, Hadwen, and Law have become familiar to all students of the subject. On the whole, however, Canada has not taken full advantage of her position—geographical, climatic, and financial—to conduct investigations into a subject of paramount importance both to her own interests and to those of the Empire.

THE IMPORTANCE OF PARASITOLOGY

Human Parasitology.—Parasitology received its modern importance mostly in the realm of human medicine and may properly be said to have commenced with the discovery of the part played by the mosquito in the transmission of the serious tropical worm, *Filaria bancrofti.* This discovery was made by Sir Patrick Manson in China in 1878. Investigations in human parasitology followed fast on this discovery, mostly in tropical and subtropical countries, and within thirty years there was a fund of information at the disposal of mankind which would enable most of the dread tropical diseases to be controlled and make the hot parts of the globe inhabitable for the white man. The conquest of the tropics is one of the supreme triumphs of medical zoology.

The parasites of the domesticated animals are very closely related to those of man; so much so, that no student of the one branch can afford to neglect the study of the other. In practice, however, several very important distinctions must be drawn between these two groups. In the first place, human parasites are essentially tropical in their importance; those of animals, particularly the parasitic worms, are nearly as important in temperate as in tropical climates. (The blood protozoa of animals, fortunately, are mainly tropical.) Secondly, hygiene and sanitary science have practically eliminated human parasites from temperate countries; these sciences have scarcely touched the domesticated animals yet, and the parasitic worms especially continue to be highly important factors in animal health. By its very nature, veterinary parasitology is much more difficult and much more complicated than is its human branch. Animals normally live in an environment more than favourable for parasites; they continually contaminate their food with droppings; their food is uncooked and their skins are hairy and dirty.

Far from improving, the situation in animals is steadily becoming worse. As agricultural science makes possible the keeping of more and still more animals on a limited area, so also does it make possible an increase in the numbers of their parasitic worms.

There has been a gradual transition from nomadic conditions on open fields and hills to enclosed fenced condition in farm-steads. Under natural conditions, ground is normally lightly stocked with scrub animals; in artificial modern conditions, land is heavily stocked with pure-bred animals with a high productive capacity and a low resistance to disease. Egg production in the parasites has been evolved to provide against light stocking—for sheep in the hills and horses in the dry plains. The chances of individual reinfection were slight—about one in a million—and so *Ascaris* learned to produce some 30,000 eggs daily and *Taenia* 150 millions yearly, so that even one might return to continue the race. We have confined the range of our animals, the eggs have been concentrated, and parasitic infection has become so heavy as to

produce disease. It must not be thought that the parasites are harmful naturally. A large proportion of such pathological lesions as do occur are due to larval forms. No adult worm desires to injure its host and so sacrifice its own life. It is only when, through accident, numbers increase beyond the supporting capacity of the host that disease commences. Practically all wild animals carry worms; few suffer from worm-produced disease. That is a penalty we pay for our disturbance of the balance of nature.

The Present Position.—In agriculture it is difficult to estimate what this disturbance is costing us. Sheep and horses suffer more from parasitic disease than from any other cause, pigs and carnivores nearly as much. Probably we would not be far from the mark if we estimate that about ten per cent. of all sheep (especially lambs) die yearly from worms—directly or indirectly. The percentage is even higher in horses and pigs. The losses are not confined to death however; condemnation of food offal in the meat market, lowered production of meat, milk, eggs, young power, and growth are even more important. They are generally attributed to other causes, as the common symptoms of helminthiasis—a prolonged and progressive afebrile unthriftiness gradually resulting in death—are not sufficiently spectacular to attract attention, or are masked by superimposed bacterial infections. There are no statistics available as to the monetary loss in the Dominion caused by parasites in stock; the Bureau of Animal Industry in the United States, however, estimates the annual loss to be over one hundred million dollars in that country. The losses here, and in the Empire generally, must assume terrific figures.

We know that some of this loss is already preventable and we are reasonably certain that much more could be, if we had fuller information about the various species infecting animals. About a thousand species are already known to parasitise domesticated animals in various parts of the world. We know none of them thoroughly—nor even well—and most of our existing knowledge is very recent. We can recognize them on sight, but that is the sum of our knowledge in well over nine-tenths of the cases. We know little of their distribution, or the causes governing this, and practically nothing about how they affect the host. In under five per cent. of the cases do we know even the outline of the life-cycle. We have only the most superficial knowledge of therapeutic measures—few outstanding drugs have been introduced into parasitology in modern times, practically all the others in every day use are heritages of ancient civilizations. Research is too often uncontrolled and the workers are too few to make other than slow progress. Little help is given by the pathologist; the technique for examining parasites is too little understood, and even trained pathologists only see the grosser forms—and most species are minute. But even with our present knowledge much could be done to reduce losses in stock—if only the stock-owner would co-operate.

Over sixty per cent. of the human beings in the world are parasitised. These are mostly in the tropics, however, and in civilized, temperate countries, the percentage is very much less.

The Future.—The situation is serious and is yearly becoming more serious. More and better research is urgently required. But parasitologists can not be made over-night, and the process of interesting and training suitable men must be carefully carried out. Parasitology is not a narrow field of study—it is as wide and general as biology itself; and no zoologist can pass through his professional life without over and over again meeting parasitic helminths; but it cannot be limited to zoologists. Parasitology should postulate a general zoological training; but as a rule, the young student gets a type of introduction to



Section of Fasciola hepatica in the liver of a sheep. This parasite is a serious menace to sheep in Eastern and Western Canada.

parasitology in his early zoological classes which effectively puts him off the subject for the remainder of his professional life. The subject is usually inaccurately taught and uninterestingly presented, and the few exceptions serve merely to emphasize this. It is almost always entirely anthropomorphic in its outlook, and unsuitable or aberrant types are chosen, either because it is believed that students will become interested in parasites only because they occur in man, or because tradition had selected the types before the science was established and only human parasites were then accurately described. Neither reason seems to me to be valid. Once the student's interest is excited, it becomes necessary to discuss the subsequent qualifications necessary for the man who should be encouraged to undertake parasitological research. This research may, of course, follow several different avenues of approach; and which we should adopt will largely depend on the type of man we are dealing with. There appear to be three main avenues—apart, of course, from the use of parasites purely as zoological material, for cytology, embryology, experimental biology, and so on. Applied parasitology seems to demand one or more of the following three qualifications:

1. *Zoological.*—We must be able to recognize our animals when we see them; i.e., we must know taxonomy and morphology. We must know their life-cycles in the free state, or in the intermediate host, and we must be able to recognize the stages. We must know how the various forms live, what products they secrete or excrete, how they feed, breed, and so on. These are all questions of pure zoology, and a general zoological and biochemical training is necessary for the man who undertakes research along these lines.
2. *Medical and Veterinary.*—We must know what a helminth does to an animal, how it affects the animal organism by its habitat, its search for food, its larval and adult migrations, how it disposes of its metabolic products and disperses its eggs or larvae, and how it can be eliminated. These are problems of pathology and therapeutics which can only successfully be tackled by one with a medical or veterinary training, with his knowledge of comparative pathology, bacteriology, and biochemistry.
3. *Agricultural.*—We must know how to prevent infection in our stock, how agricultural practice hinders or prevents infection, how preventive measures can be formulated so as not to conflict too much with established practice, or to destroy valuable by-products. This is a most important line of research, where an agricultural training is essential, with a knowledge of zootechny, breeding, and feeding habits of stock, and general farm management.

Each worker must know, at least, a little of the other branches and no real hard and fast line can be drawn between the various kinds of research. Veterinary parasitology, for example, cannot be restricted to a knowledge of the forms in domesticated animals alone; it must include those of man and of the related wild animals at least, and, ideally, would include all parasites of all animals. The young worker will find that he must have more than the patience of Jacob before he can obtain his Rachael. He will have to live in the shadow of the slaughter-house and the manure-pile, and work, often, under most uncomfortable conditions. And he must do it because he wants to do it. In this, however, as in most other research careers, success depends less on ability than on adaptability.

I hope I have not painted too dark a picture of both the present and the future. There are many at present who amply comply with the requirements I have laid down. But many more are necessary before progress will be obvious. They must come forward of their own free will, however, not as the result of financial baits held out by research institutes. Their aim must be to make a life rather than a living.

THE INSTITUTE OF PARASITOLOGY

The dangers of the situation had become obvious to those scientists who had seriously considered the matter, and, a few years ago, steps were taken by the National Research Council of Canada, the Empire Marketing Board, and the Quebec Government to try and improve the situation. This collaboration has resulted in the establishment in connection with McGill University of the Institute of Parasitology. This is the first Institute in the Empire established solely to deal with parasitology in all its aspects; and the sponsors hope that, while it will play an important part in investigating problems of importance to Canada, it will also prove a link in the chain of science which is one of the main supports of Imperial unity.

The Institute is housed in a building, constructed with funds supplied through the generosity of the Quebec Ministry of Agriculture, on Macdonald College campus, and there is plenty of accommodation for that future development which we hope will be inevitable. It consists of a

brick building, in harmony with the existing buildings, and planned in such a way that it can be extended as required without alteration to the general design.

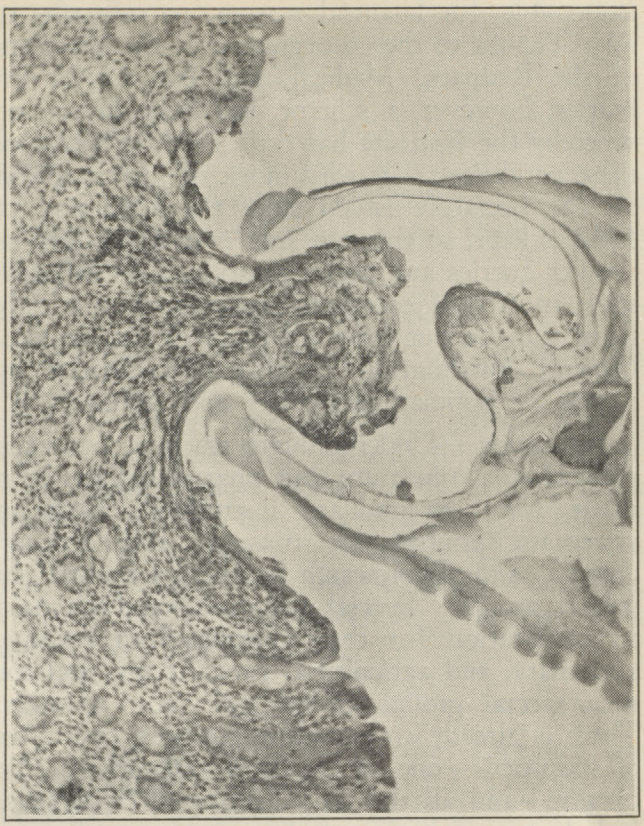
There are three floors, and a flat-roof available for outdoor experiments in summer. The basement, in addition to the usual services-distribution plant, contains a dark room, a constant-temperature room, and a large room which houses the aquarium and, for the time being, the post-mortem theatre. On the ground-floor are the library, two individual research study-laboratories, and the secretary's office. Upstairs are a small room for the animal attendant and a small private laboratory, as well as a large and well-equipped general laboratory.

The equipment provides for cold-storage, various forms of sterilization, embedding and section-cutting, micro-photography, fæces work, and the usual technical work which is essential in every laboratory.

The library, which is growing daily, is well stocked with books, monographs, papers, and a few of the periodicals of special interest to parasitology. As this is, perhaps, the most important single research instrument, it is hoped to extend the journal list as soon as funds become available.

The Associate Committee.—The maintenance and equipment of the Institute is financed by a joint grant from the Empire Marketing Board and the National Research Council, and governed by a body called "The Associated Committee on Parasitology." This Committee consists of representatives nominated by the Council and the University, under the chairmanship of Dr. H. M. Tory, President of the Council. The other members are: Sir Arthur W. Currie; Dr. G. S. H. Barton, Deputy Minister of Agriculture; Dr. A. E. Cameron, Chief Veterinary Inspector to the Dominion; Dr. R. Newton, Director of the Division of Biology and Agriculture, National Research Council; Dr. John Todd, late Professor of Parasitology at McGill University; Professor R. T. Leiper, Director of the Division of Medical Zoology, London School of Hygiene and Tropical Medicine and Director of the Imperial Bureau of Agricultural Parasitology; the Dean of Agriculture (at present, Acting-Dean Snell); Professor R. L. Conklin, Professor of Animal Pathology at Macdonald College and Pathologist to the Institute; the Director of the Institute; and Mr. S. P. Eagleson, Secretary-Treasurer of the National Research Council and Secretary to the Committee.

This Committee, as will be seen, contains the names of some of the best known scientists and University administrators in the Empire, and is accordingly able to exert a powerful influence on the development of both the Institute and the science.



STRONGYLUS VULGARIS

This microscopic photograph shows the head of a common horse worm feeding upon the small intestine of its victim. The jaws of the worm on the right, the intestinal wall on the left.

The Staff.—The Director of the Institute is also Research Professor of Parasitology with McGill University. He is supported by Professor R. Conklin, as Pathologist, and two full-time research assistants, Dr. Ivan W. Parnell, B.A. (Ag.) (Cantab.), Ph.D. (Edin.) and Dr. W. E. Swales, B.V.S. (Tor.) V.S. (Ont.), a Secretary-librarian, and the necessary Technician assistants. At present also there is one part-time research assistant, Mr. H. J. Griffiths, B.A.Sc. (McGill), but it is hoped that this number will be increased as financial conditions improve.

The policy of the Institute of Parasitology is a three-fold one—Informative, Educative, and Research.

Information.—There is a good modern departmental library, and we receive reprints from all the important parasitological libraries in the world. At the same time, several of the important periodicals devoted mainly to parasites are on the subscription list, but as articles appear in well over a hundred separate journals, it is quite

impossible, for financial reasons, to subscribe to all. Thanks to the co-operation of the librarians of the Redpath, Medical, and Macdonald Libraries, however, a scheme has been drawn up whereby the Institute has early access to most of these periodicals. A card-index of summaries of all the literature issued since the beginning of 1932 is kept, so that the staff is in a position to answer queries and make identifications of parasites, mostly of economic importance, not only from Canada but from all parts of the Empire. General information is also disseminated by means of popular pamphlets and lectures.

Education.—Undergraduate teaching has been reduced to a minimum, but preparation has been made for post-graduate instruction, both in systematic courses for masters' and dcotors' degrees, and for research workers interested in special groups. Special attention has been paid to preparation for those interested in human, veterinary, and agricultural parasitology, and for such special groups as fur and game animals. There is already an extensive teaching collection of specimens—one of the most extensive in the Empire—and all the usual laboratory apparatus, including an aquarium and post-mortem theatre.

Research.—The preliminary stages in a planned campaign of research must consist in finding out what parasites exist in the country and what particular species are important. As the science has a profound economic bearing, a survey has been commenced of parasites of domesticated animals, fur animals, and related wild animals —because many parasites of wild animals are transmissible to both man and economic animals.

Once this information is obtained, work will be concentrated on the important species, particularly on their bionomics and life-cycle, host-reactions and therapeutics, and their control under field conditions. At the same time, attempts will be made to apply existing knowledge to Canadian conditions. While the work of the Institute will be mainly devoted to Canadian problems, it will not be exclusively local. Canada is in many respects an ideal centre for Empire research in parasitology. With its immense geographical area and climatic variations it presents, at some time or place, conditions which closely simulate those in most parts of the Empire—in fact some most important parasites are really sub-tropical species, while others are temperate or even arctic forms. Much of the information gathered here will be equally useful to other Dominions and Colonies, as well as to Great Britain, and it is hoped ultimately to attract workers from all parts of the Empire.

There is no doubt that animal parasites form a most serious menace to the health of animals of this, and other countries—at least as serious as the bacterial and virus diseases. We have disturbed the balance of nature and we are only beginning to realize that we cannot do this with impunity. This disturbance is still continuing and strenuous and intensive work will be continually required, both in the laboratory and the field, before we can regard the situation with anything approaching satisfaction.

STUDENT PUBLICATIONS BANNED

Early in February it was announced by the Principal that the University found it necessary to withdraw the privilege of selling within the University grounds or buildings, publications which were not officially authorized by or connected with the University. This action followed the appearance of two separate magazines published by groups of undergraduates to propagate their ideas on social reconstruction. By indicating prominently that they were "campus publications" their readers would readily attach the ideas set forth as emanating officially from the University, especially as some of the articles appearing in their columns had been contributed by members of the teaching staff.

These publications appeared under the names of "The Alarm Clock, Wound up and set Monthly at McGill University" and "The Black Sheep." Publication of these magazines has continued, since only their sale within the University grounds was prohibited; but one heard that the name of "The Black Sheep" might now be changed to "The Curried Lamb."

TRIBUTE TO MATERNITY HOSPITAL

That the Royal Victoria Montreal Maternity Hospital was one of the finest institutions of its kind in the world was the opinion expressed to the Montreal *Gazette* by Lady Snowden, of Adelaide, Australia, following a visit of inspection to the hospital early in the winter. Lady Snowden, as a member of a Royal Commission appointed by the Government of South Australia to study maternity hospitals, was returning to Australia after extended investigations in Great Britain and Europe. Her tribute, therefore, was based upon wide experience and, for that reason, was the more acceptable.

ASTROPHYSICAL DISCOVERY

An important contribution to astrophysical knowledge has been made as the result of investigations carried out last summer at the Dominion Astrophysical Observatory, Victoria, B.C., by Dr. J. S. Foster and Dr. A. V. Douglas, of the Department of Physics, McGill University. The results of the investigations, which revealed multiple electric fields in the atmosphere of the stars, were reported to the McGill Physical Society by Dr. Foster in December, and a full account of them has appeared in the observatory publication. Dr. Foster emphasized that the unsurpassed equipment of the Dominion Observatory had made possible the striking information he was able to gain and report.

Athletics

BASKETBALL

McGill's crack intercollegiate basketball team maintained the supremacy established in recent years and through defeating Toronto, Queen's, and the University of Western Ontario, swept to the Canadian Intercollegiate Championship of the present season. McGill also defeated the University of Vermont by 32 to 24, but was less successful in later international competition and lost close games to St. Lawrence University, of Canton, New York, and Clarkson College, of Postdam, N.Y., by 46 to 42 and 46-39.

The McGill Women's Basketball Team also won an intercollegiate championship by defeating Queen's and 'Varsity, Queen's having previously defeated Western.

SWIMMING

McGill retained the Canadian Intercollegiate Swimming Championship by defeating Toronto in Montreal on February 27th by 35 points to 33. This was McGill's thirteenth win in the twenty years that the title has been contested.

SKIING AND WINTER SPORTS

This winter, for the first time in the athletic history of the University, the colours of McGill appeared in Europe, when, through the generous assistance of Messrs. Walter Stewart, Walter Molson, and others, the McGill Red Birds Ski Team visited St. Moritz, Switzerland, to engage in return competition with the joint Oxford and Cambridge Ski Team that visited Canada a year ago.

A full account of the competitions on this occasion appears elsewhere in this issue of *The News*. McGill also took part in the eighth annual International Intercollegiate Winter Sports Union Championships, held in February at the Seignory Club, Lucerne-in-Quebec. Dartmouth, with 30 points, won this meet, McGill coming second with 26 points, followed by the University of New Hampshire, St. Patrick's College, Ottawa University, Bowdoin College and Norwich University of Northfield, Vermont.

WATER POLO

University of Toronto retained the Intercollegiate water polo championship by defeating McGill in home-and-home games by 9-6. McGill won in Montreal on December 10 by 3-2, but 'Varsity equalled the score in Toronto a week later and forced the deciding match into overtime. The first overtime period was scoreless; McGill and Toronto each scored once in the second period; and Toronto scored three times in the third.

ASSAULT-AT-ARMS

The University of Toronto gained the 20th annual Canadian Intercollegiate Assault-at-Arms in Montreal on February 18, by scoring 6 wins out of a possible 8 in the wrestling programme and adding 3 more points in the boxing for a total of 9 points out of a possible 17. McGill won 4 boxing bouts, 1 wrestling bout, and the fencing, while Queen's, the defending champions, captured but 2 points, winning 1 boxing bout and 1 wrestling match.

GYMNASTICS

University of Toronto gymnasts captured the Intercollegiate Championship in Toronto on February 25 by defeating McGill 2702 points to 2646. Toronto thus won the Caron Trophy, emblematic of the team title, and also won the individual championship.

HOCKEY

By virtue of a double win over the University of Montreal and a win over and a tie with the University of Toronto, McGill gained the Canadian Intercollegiate Hockey Championship of 1932-33. McGill also won the Eastern Intermediate Intercollegiate Championship, defeating Loyola College, Montreal, in the deciding game by 3 to 1.

In international intercollegiate matches this winter, McGill scored a clean sweep. The first game was in New Haven on December 16, when McGill defeated Yale 3-0. Next night McGill encountered Harvard in the Boston Garden and won 4-2. Harvard sought revenge at the Forum in Montreal on December 23, but McGill fought off the Crimson effort and won by 5-2. Then, in the Christmas holidays, McGill travelled to Lake Placid, N.Y., and in three games on consecutive nights defeated Dartmouth by 8-2, 12-3, and 13-1. Later in the season, the University of Toronto team travelled to the United States and clinched the re-establishment of Canadian intercollegiate hockey superiority, which has been questioned for some years, by defeating Princeton by 3-1, Yale by 3-1, and Harvard by 8-1.

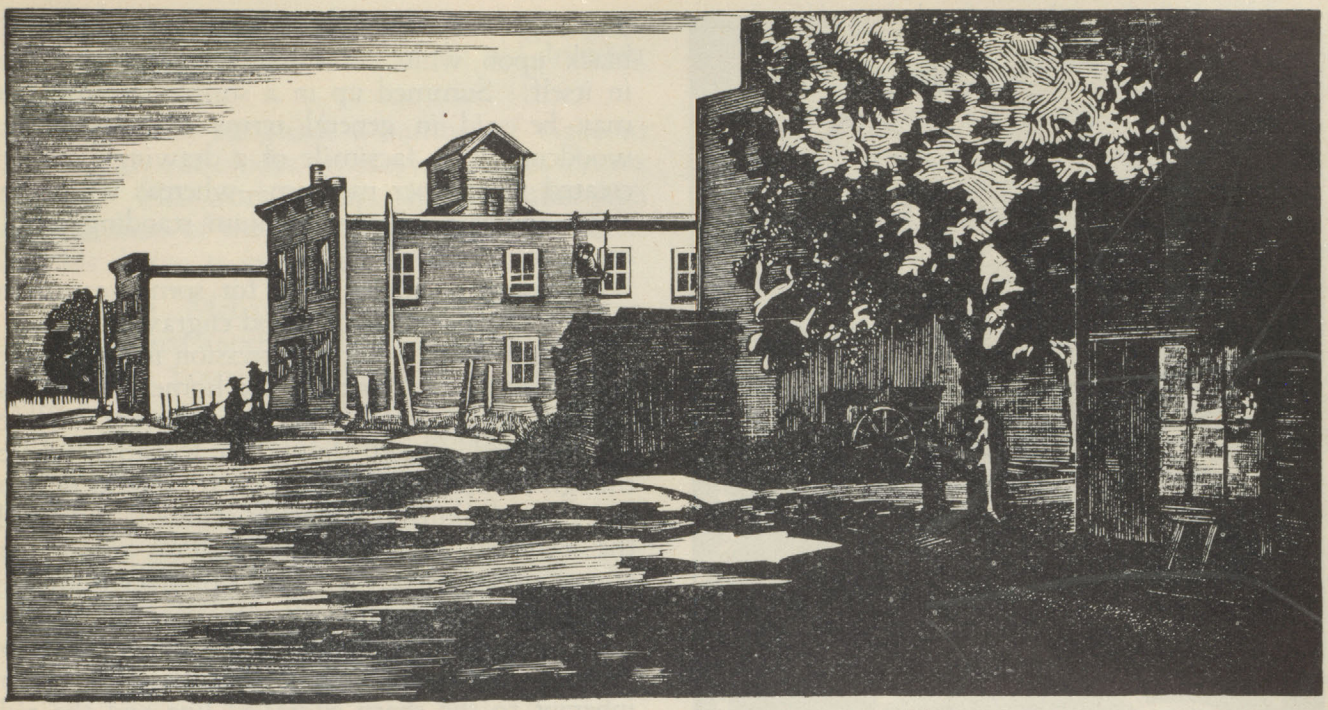
(Continued on Page 36)



SIZE OF ORIGINAL 6¾ x 8 INCHES

NUDE BY A LAKE

By Eawin H. Holgate



STOCKTON, MANITOBA SIZE OF ORIGINAL 7 x 3⅞ INCHES

This engraving, by Walter J. Phillips of Winnipeg, illustrates the cleanness and precision that have won for this artist a high position in the ranks of contemporary craftsmen.

Some Comments on Wood Engraving in Canada

By EDWIN H. HOLGATE

SO great has been the revival of the woodcut in western Europe during the past twenty years, that it may be of interest to review its case, weigh its peculiar qualities, and consider our own reactions to this renewed interest in Canada.

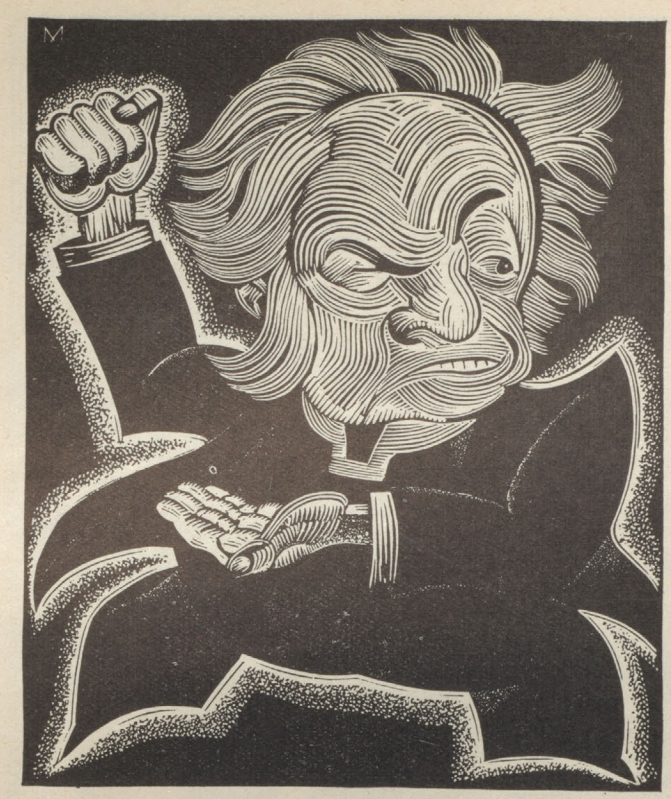
In the making of fine books, the woodcut has long been favoured, first through necessity and later through appreciation of its intrinsic beauty. The beginnings of wood engraving are a subject of much conjecture, but we shall not enter into its discussion here. In western Europe its parent was the block-print, used for the repetition of designs on fabrics, but the woodcut, as we know it, had to await the production of paper, a feat that the East had accomplished centuries before. It seems safe to say that the earliest known prints date about A.D. 1420.

One is frequently asked about the elementary principles of the woodcut and it may not be amiss to refer briefly to the various ways of printing pictures, in order to answer these questions at the outset.

There are three basic methods of producing a printed impression. In the first place there is the relief print, in which the smooth surface receives ink from the ink-roller. All lines, dots, or patches, cut away from the surface, since unable to receive ink from the roller, are equally unable to transfer ink to the paper when pressure is applied.

Secondly, there is the intaglio print—etchings, line engravings on metal, and their variations—in which a rut or furrow is produced. In this process the whole plate is inked and wiped clean. Enough ink remains in the ruts or hollows to show sharply when the warmed plate, covered by a dampened sheet of paper, is run through a roller press. The cleaned surface of the plate, theoretically, does not show colour.

Thirdly, comes the surface print—lithography and kindred methods—which depends upon the



SIZE OF ORIGINAL 7¾ x 9¼ INCHES

THE REVEREND EGERTON RYERSON, D.D., 1803-1882

A caricature by Jack McLaren, from the portfolio "Our Great Ones," published in a limited edition of 450 copies by the Ryerson Press, Toronto, in 1932.

antipathy of oil to water. In this instance the whole printing surface is of one plane and a heavy fat ink is used. The printing surface is treated in such a way that parts not intended to print are made to retain moisture, while those destined to show are drawn in with a greasy material. The fat ink used on the roller will leave the roller only in those places sympathetic to fat; the damp parts ignore it. Upon impression, those parts which have accepted ink transfer it to the dampened paper, and a lithographic print has been made.

Wood engraving then falls in the first group. that of the relief print, and it becomes the artist's particular task to remove whites in order to convey his message. In our day, when the engraver is almost invariably the designer as well, it is logical that he should make his design always with the knowledge that it should be in a manner natural to the tools employed, and that the lines or patches removed should command his especial attention. In this point lies the fundamental difference between the white line engraving and that of the woodcut of the period of Durer, Holbein, Cranach, and others, in which a positive drawing was left by cutting around all the black lines in order to produce a facsimile of the original drawing. By positive, I mean a drawing in black upon white—a thing complete and final in itself. Summed up in a simple statement, it may be said in general terms that the earlier woodcut was a facsimile of a drawing—a work created in another medium—whereas white line engraving is a creative medium standing solidly on its own feet.

European countries have for some years been undergoing a revival of wood engraving. steadily working toward a purer expression in white line, and England is at present the home of a robust band of engravers who take second place to none. The revival spread slowly to Canada, where, though the numbers are not great, a great deal of fine print making has already resulted, and, with the increased interest in the medium among our young artists, a lively and direct product is already apparent. A hopeful sign of progress is also to be seen in that small but growing public of amateurs who are finding that there is charm inherent to the sharp engraved line and the rich blacks which no other medium can quite equal. Our art schools have recognized this, and engraving is being taught regularly in a number of them with excellent results.

Among our better known engravers, Walter J. Phillips, who formerly worked in the coloured woodcut of the Japanese method, of which this article does not treat, has within the past several years been devoting himself to the white line wood engraving, with results of great delicacy of design and cutting. His design is invariably good and its adaptation to the tools used is satisfying and complete. A craftsman of the first order, his engraving and printing are of a cleanness and precision that place him high among contemporary engravers here and abroad. Phillips, who lives in Winnipeg, has been the means of creating an appreciation of prints in the West, and has stimulated younger artists in the practice of engraving.

For several years we have been familiar with the pen and ink caricatures of Jack McLaren, appearing in the *Canadian Forum*. More recently McLaren has been turning his attention to the linoleum cut, in which he has found an increasingly sympathetic medium. From lampoons of figures in Toronto's art world, McLaren recently produced his most lusty and boisterous effort to date, a portfolio of twelve caricatures of the glamorous figures of the time of our fathers and grandfathers. Risking extravagant words, I must say that here is gorgeous caricature. For apart from impaling his subjects on the spit of his good-natured irony, his design is always bold and firm, and his variety of textures gives

these prints a richness that places them apart. They have the robust quality of the old drinking song.

André Bieler has made a number of vigorous and broadly-cut blocks, employing gouges almost entirely. His work always shows a thorough consciousness of the tools used to gain his effect, and his design is invariably solid and bold.

Preceding McLaren's portfolio by a year, there appeared another venture in Canadian book making—a poem—"Metropolitan Museum,"* with twelve wood engravings by the author of this article; the whole produced in plaquette form and printed from the original blocks—the first time, to my knowledge, that this had been attempted here. Better critics may pass judgment on the engraving. but I think that some satisfaction may be felt that in the two books mentioned—"Our Great Ones," and "Metropolitan Museum," some obstacles have been cleared away to make the path easier for others to follow. "Other Days Other Ways"† I think, marked the revival of book illustration in woodcut in our country.

This article does not claim to catalogue the engravers of Canada, as much space would be required to give even a short appraisal of their effort, but the names of Charles F. Comfort, Thoreau McDonald, Iva McPhee, Ernest Newman, Felix Shea, Paul Caron, and H. E. Bergman come readily to mind, and these are only a handful among an active group of artists whose work may be followed with interest.

What are the qualities which particularly distinguish the wood engraving from other media of the graphic arts? With a material whose very hardness offers resistance to the cutting tools, the nervous line is perforce eliminated and a more rigid and calculated line results. The element of hazard and accidental effect, interesting in some

*Metropolitan Museum, poême par Robert Choquette, Montreal, 1931. Limited Edition of 450 copies.

†Other Days Other Ways, Louis Carrier Limited, Montreal.



A STREET IN QUEBEC Size of Original 7 x 5⅞ Inches

This engraving by André Bieler, as Mr. Holgate has noted, reveals the thorough consciousness of the tools used to gain an effect that is characteristic of Mr. Bieler's work.

other media—notably with certain types of etching—is missing. But its very directness of statement—its crisp whites and rich blacks—give the woodcut a luminous quality that lends itself to bold design, a dramatic intensity and severity which no other medium possesses, to the same degree. It is a medium capable of very skilful exploitation—the variety of cutting being great—so that both the boldest of poster-like designs and the extreme delicacy of a Bewick or a Calvert are within its range. Here is a rich field for exploration by artist and amateur alike.

*The Making of Scientific Movies**

By F. E. LLOYD

(Macdonald Professor of Botany, McGill University, and President of the Royal Society of Canada)

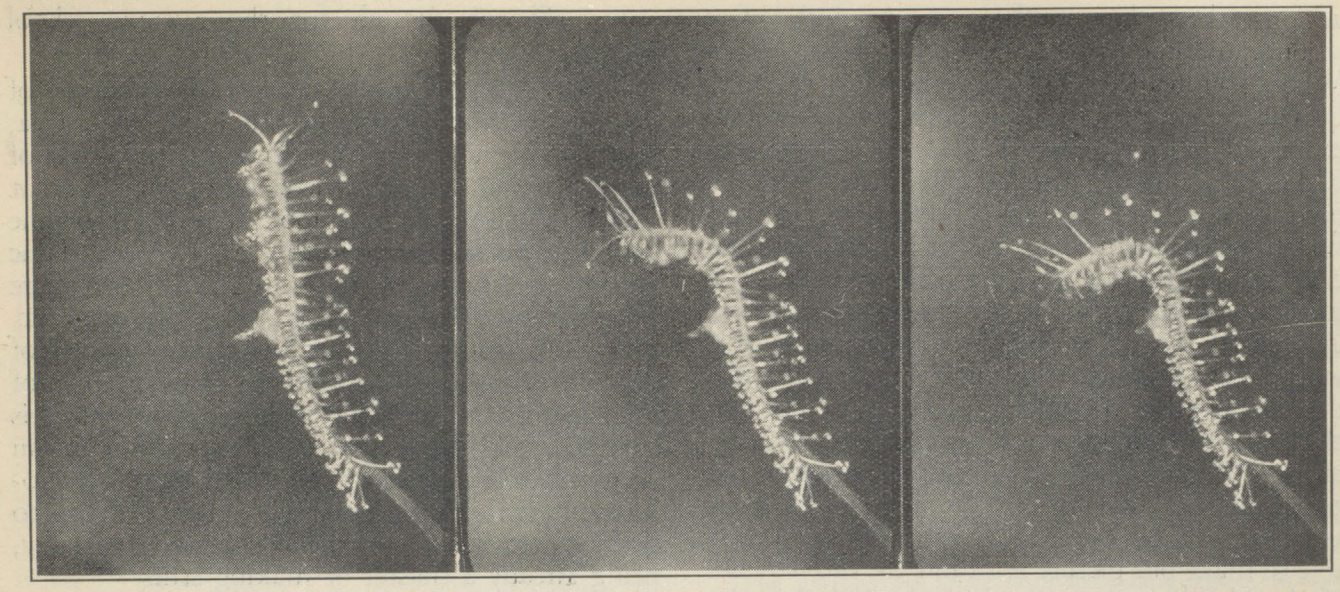
THE Chinese have many proverbs, of which one is that "One seeing is better than a hundred hearings." Possibly the modern movie fan would say that a bit of both is better still, and he may be right. The point is that for hundreds of years teachers only talked. Thanks to the advancement of science, we now have a rich field of capacity to draw upon. Aside from monotone and coloured lantern slides (I am not speaking here of photographs, charts, and the like), we have movies in monotone and colour, both in flat and stereoscopic vision, with and without sound, or often enough noise, giving in some instances beautiful and true results. But the cost of these is enormous and they are available only in the professional field; even here monotone flat vision, with sound, is the usual limit.

I have spoken of the cost of making movies in order to emphasize a rather important point, namely, that it is hardly possible that we should have a moving-picture camera and all that this implies available for the laboratory were it not for the popular consumption of the products, and we should thus be robbed of a valuable tool in the field of science.

Obviously the chief usefulness of the motion picture is to record movement and to permit its analysis. This may not appear at first to be important, but in fact it is. As a botanist, I naturally think of the movement of plants, a subject that absorbed much of Charles Darwin's attention in his later years. Before the advent of the motion picture, only crude methods of analysis were available. These, it is true, yielded in the hands of patient observers fundamental knowledge; but they by no means exhausted the field. Witness the results of the close analysis by means of motion pictures of the geotropic movements of plants achieved by several workers under the able guidance of Professor Went of Utrecht. In order to get the necessary records, growing plants were photographed at intervals with infra-red light, to which they are not sensitive, so that it was as if they were in total darkness, a hitherto impossibility. Very illuminating studies of twining and nodding and especially of ciliary movements have been made also by Prof. Ulehla, of Masaryk University, the last mentioned being a particularly difficult subject of study on account of the very rapid rate of vibration of the cilia which are the motile organs of unicellular animals and plants. Particularly brilliant results were obtained by Dr. Canti, of Cambridge, in recording the behaviour of living cancer cells and fibroblasts, and his film has been used extensively here and elsewhere, especially by the medical fraternity for instructional purposes, though no less valuable in general education. These are examples of what has been and can be done. In this way not only is the research worker afforded a tool of great value, but, after the results are obtained, they are available for all interested, for they may be used for teaching purposes in the schools and colleges, constituting true educational films, and not those so frequent travesties seen that often do more harm than good.

We at McGill University have also had our share in this sort of work. Some five years ago I made an observation the nature and importance of which warranted an effort to record it in motion pictures, namely, the behaviour of the protoplasm during sexual reproduction in one of the algae, *Spirogyra*. This was accomplished only after much effort. It was a game, something like that of cooking a rabbit—"first catch your rabbit"—and it took two years before a really successful result was obtained. This film is now used year after year in the instruction of our students in botany.

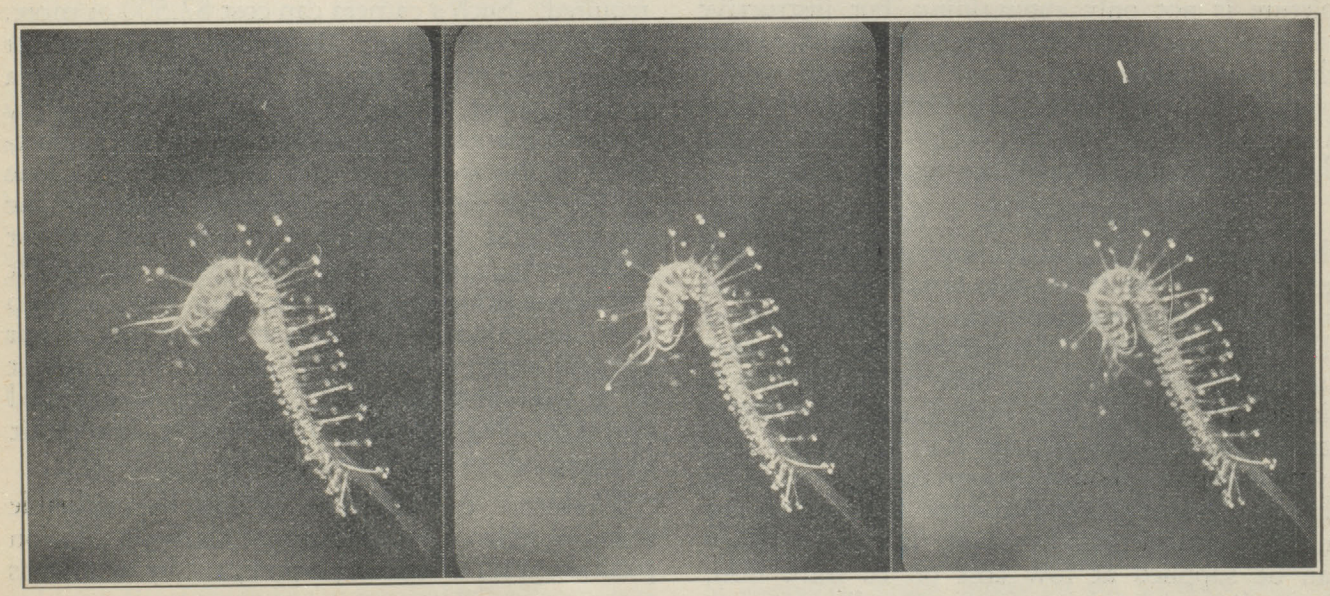
We have also made movies of the protozoa and protophyta, the lowliest organisms of the two kingdoms of living things, which, in addition to being indispensible to us in the investi-



The Capture of Small Flies by the Cape of Good Hope Sundew: Frames from a Scientific Movie—I.

gation of a certain difficult problem, that of the behaviour of the constractile vacuole in *Paramoecium*, have been of the greatest interest to students young and old, The pictures include also the feeding habits of a protozoon, *Vampyrella*, which devours only the protoplasm of certain algae, and this formed the foundation for a contribution to our knowledge of this organism published in one of the leading European journals, *Protistenkunde*. This is the only time this has been accomplished, for it is a very difficult subject. I may say that we keep our apparatus ready at all times so that when chance favours, we are ready to catch our rabbit.

Similarly, we have been able to record for teaching purposes the swimming movements of an extremely interesting plant, *Volvox;* the feeding, defecation, and movements of the protozoan *Amoeba*, the growth of crystals of sulphur, demonstrating the important fact of the shrinkage on crystallization, and the rate and manner of procedure in rhythmic precipitation. We have recorded also the Brownian movement of minute cells of one of the desert rubber plants, the Guayule, *Parthenium argentatum*. In some respects the most important results have been obtained in recording the behaviour of the traps of our bladderworts, species of *Utricularia*. The action of this trap in catching minute animals is so swift that the eye cannot follow it; the trap itself is futhermore so minute that it can be examined only under fair magnification with the microscope. To make a motion picture of this trap in action is a sporting proposition, for the



The Capture of Small Flies by the Cape of Good Hope Sundew: Frames from a Scientific Movie—II.

action takes place within one-sixteenth of a second, and one never knows when it will occur. When you realize that the camera is shooting film at the rate of sixteen pictures a second, which, expressed in more easily evaluated units, means $234.00 an hour, the condition described as having "cold feet" can easily supervene. A careful study of conditions, of course, increases the chances of catching the action, but at that it requires courage to shoot the camera. But when, in order to spread the action over one-fifth of a second, we resort to slow-motion photography, the operator has to shoot the camera at the rate of $3,600.00 an hour, or in less nerve-racking terms, 160 pictures a second, the sportiness of the game reaches a climax. With the generous assistance of the Associated Screen News, I was able to make one picture recording the movements of the bladderwort trap which showed that the action I was studying occupies only one-thirtieth of a second. When it is realized that a small animal is caught by the trap in this short flash of time, one gets a glimpse of the extraordinary character of this elaborate plant organ.

The reverse of the coin is illustrated in the taking of action which is slow; and here one may be able to save a little money. I have recorded the action of the sun-dew (Drosera) by making use of the well-known method of time-lapse photography, taking one frame or picture at intervals of two, three, and four seconds. When the picture is projected, action which occupies 12 to 24 hours may be seen in a few seconds, the apparent speed of action being 1800 ot 3600 times as fast as the original. Thus a very dramatic presentation of the behaviour of this plant in catching insects can be obtained, and such a picture is not only entertaining, but instructive in the highest sense. If Darwin, who first studied this plant exhaustively, could have seen such a picture he would have been entranced. I have also made films of the action of the Venus fly-trap (*Dionaea*) which are equally valuable.

Similarly, some films have been made under the auspices of the Entomological Branch of our government, exhibiting the behaviour of certain insect parasites, the excellence of which deserves the highest praise. Parenthetically, one may emphasize here again that films of the kind mentioned are of the first importance in teaching students young and old, and it may be urged that every support should be given to non-profit sharing agencies organized for the purpose of making such pictures available to schools. They can be supplied at low cost on 16 mm. film, demanding only the use of a small projector, quite efficient enough for the average school room.

Now as to something about the technique of making motion pictures of this kind. The idea, fostered for the sake of increasing the sales of small motion picture cameras and materials, that all you have to do is to look at it and press the button, does not apply in this field. Most of the pictures produced by amateurs in this way are pretty awful. All one has to do to take scientific, or to be more specific, biological movies of permanent value in education, is to be first of all a competent biologist who really knows his material. In the second place, one must be an accomplished microscopist, knowing microscopical methods thoroughly. Then one has to be a camera-man and know one's photography, being already a master of making stills.

A good infusion of the artistic sense and more than a modicum of mechanical ingenuity added to all these and you have the makings of a good operator. Even such a one will fail without the resources of patience and imagination and some knowledge of the psychology of the drama. This is all, except the tools to work with, which at the minimum include a good camera, a battery of lenses, a couple of first rate microscopes, and gear for running and controlling the speed of the camera from 16 frames a second to one frame each ten minutes or even longer, and an assortment of gadgets and junk of various kinds, together with adequate lighting equipment. I suppose that one can make a start with say $2,000. If the occasion demands "slow-motion photography" a name which belies the facts (I always call it sudden death photography), a camera capable of shooting 160 frames a second is required. Such a camera can cost $2,500 or more. This does not include the special equipment for taking extremely rapid action such as that of a moving bullet, but this is a very special job for a few with adequate backing. I may say that the Department of Botany of McGill University has done all its work with the minimum of apparatus, the original cost for camera and gear being about $800 only. With this and other equipment already in its possession, we have been able to turn out primarily to illustrate the results of our research work, a number of films of great interest in general and of equal value for educational purposes. McGill University deserves the credit of being one of the first to carry on this work.

I venture to add that among the valuable material adjunct to educational methods, motion pictures, with a serious purpose, are by no means

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Book Reviews

CANADIEN: A STUDY OF THE FRENCH-CANADIANS. By Wilfrid Bovey, *Director of the Department of Extra-Mural Relations, McGill University.* J. M. Dent & Sons, Toronto, 1933. $2.50.

IN this volume Col. Bovey has presented a unique study in English of French-Canadians, their historical and geographic backgrounds, their achievements in the past, their culture, religion, and politics, and the work that they are accomplishing in Canada at the present time. The author states that the volume leaves many aspects of *Canadien* achievement untouched upon, or only touched upon, and in the nature of things, this must be so, but the reader will be impressed by the comprehensiveness of the book and must search if he would discover notable deficiencies.

From the easy style in which the book is written and the uninterrupted manner in which it flows from one aspect of French-Canadian life to another, the casual reader will be in danger of judging the book from a superficial point of view. He may even regret that it is not more controversial, that it "attacks" no one, that it attains a measure of judicial calm in considering those aspects of our history in which the interests of our two races have clashed—notably the expulsion of the Acadians, the English conquest, the rebellion of 1837, and the Riel Rebellions of 1870 and 1885—that, in short, it is definitely friendly. In forming these opinions, he may overlook the fact that it provides a notable beginning in a field hitherto almost untouched, that the easy style cloaks the inclusion of a mass of information, and that the opinions expressed—whether one agree with them or no—are usually the result of intimate knowledge of the French-Canadian point of view and sympathetic understanding of how this affects the *Canadien's* relations with his English-speaking fellow-countrymen.

Such understanding is rare; and the author does not exaggerate when he writes: "Of all those who ought to know the *Canadien*, and do not know him, the most astonishingly unacquainted are his fellow-Canadians." It is the unfamiliarity on the part of English-speaking Canadians with all things French-Canadian that this book will do a service in helping to dispel. Col. Bovey has portrayed a vigorous race, and the full measure of its vigour and accomplishments, not always fully recognized abroad, or even at home, have provided him with striking material. He has handled the material well, has produced a book that is entertaining and at the same time informative, and, in so doing, granted the widespread distribution that one believes the book will enjoy, has rendered a service to all that is of the best in Canadian citizenship.—R.C.F.

LANGUAGE AND LANGUAGES: AN INTRODUCTION TO LINGUISTICS. By Willem L. Graff, Ph.D., *Associate Professor of Germanic Languages in McGill University.* D. Appleton and Co., New York and London, 1932. Pp. xlvi-487.

The events of the past quarter-century have increased and exaggerated the feeling of national self-consciousness in nearly every corner of the human menagerie. Barred cages have been set up and isolation secured; contamination from the outsider in commerce, politics, language, and thought is denounced with crusading fervour. The self-determination of smaller communities has been preached and effected with small regard for natural obstacles and wider necessities. Nationalism in language has flourished to a degree never before consciously realized; in Ireland, Norway, Czechoslovakia, South Africa, Lithuania, and Latvia statesmen and educators have vehemently fostered the 'native' forms of speech and striven to raise them to a literary level. In Germany the campaign to 'purge' the language of foreign borrowings and imitations persists, and even the United States is publishing dictionaries, grammars, and panegyrics of the 'American' speech Artificial universal languages are apparently making little or no headway.

The nations are more than ever language-conscious, but the international, humanistic, and scientific view of language is slower to become popular. Language is the great symbol of the human race, at once the servant and parent of thought, a great sociological force and the major answer to the question why we resemble human beings. The origin of speech remains a matter of speculation, whether it be a system built on a pantomime of signs and gestures, or a somewhat arbitrary convention, interpretation and expansion of sounds uttered under stress of feeling, comparable with the cries of animals, or an onomatopoeic imitation of the sounds and noises of nature, or a combination of all these and other possible elements But the growth of language constitutes probably the greatest single achievement of our kind, and is a subject of unfailing interest and fascination to all who feel that the proper study of mankind is man.

Whether one's interest lies in the welter of actual languages used for communication or literary self-expression by the manifold communities of mankind, or in the more philosophical and psychological study of languages as such, or in the mechanism of speech and its physiological implications, every person who studies his own or other forms of speech will welcome Dr. Graff's useful and authoritative introduction to the linguistic science.

Interest in linguistics has grown apace in the last half-century, and the last decade especially has seen the foundation of new societies and elicited the efforts of scholars to investigate the field of language. Dr. Graff's volume is one of the first major contributions of scholars in Canadian universities to this science, and it is a matter of gratification that McGill University is foremost in productive work in linguistics.

The scientific approach to language requires a scientific terminology, and Professor Graff provides an elaborate glossary of the technical terms involved. This and the summary afforded by the detailed table of contents may lead the unsophisticated layman to regard the work as rather formidable and somewhat esoteric, and indeed there is something extravagant and breath-taking in the equipment of definitions required as tools for the treatment of comparatively simple linguistic ideas and tendencies. But the author, comparing the terminology of chemistry, stoutly insists on the scientific need for technicality.

The book, however, will be found eminently instructive and readable, whether by the professional linguist, who may well find his ideas clarified and focussed by Dr. Graff's analysis, or by the teacher or student of language or humanity.

The opening chapter on the mechanism of speech is a sound and careful description of the physical and phonetic side of speech production, from which the author turns to the problems of meaning and accentuation, and the more abstract implications of language. In the second part subjects more attractive to the average reader are described and exemplified; the actual vicissitudes of language as it exists and is used are explained, the everlasting and uncontrollable process of change in sounds, forms, and meanings of words. Here the fortunes of language as the adjustable instrument of thought and human association are traced with the aid of many enlightening instances.

Finally the author appends a valuable classified list (based on the work of European scholars) of the known languages of the world, ancient and modern, and a brief description of their inter-relation. It would be interesting to compare this list with that of the forms of speech into which the Bible, or portions of it, has been translated.

An excellent linguistic map of the world facilitates the understanding of this portion of the book, and the long bibliography of reference works, manuals, and authoritative discussions of the linguistic science will afford ample scope for research for the reader who is tempted to delve further into the subject.

Dr. Graff has succeeded beyond expectation in combining an introductory outline of linguistics with a general book of reference for the more advanced linguist.—C. H. CARRUTHERS.

A HISTORY OF EUROPE FROM 1378-1494. By W. T. Waugh. Methuen and Co. 16 Shillings.

This the fourth volume of a collaborated European History in eight parts. Only two other volumes of the series have, so far, reached the public, and we may therefore congratulate ourselves that Professor Waugh had, before his untimely death, finished the one entrusted to him.

This history of the fifteenth century is a presentation of a very interesting period in Europe and in it may be found both the facts of a reference work and the provocative arguments and conclusions of a scholar. It suffers from the disadvantages of its kind. It takes a bird's eye view of all the countries of Europe (with one exception) and there is therefore a certain amount of repetition and cross reference. Equally, since it belongs to a series, one finds oneself in the middle of situations, the origins of which lie in a previous (still unpublished) volume, and are therefore unexplained. The preface states that in accordance with the place of the volume in the series no attention is paid to the history of the British Isles. It does not seem a very wise plan.

Professor Waugh's characters are all morally grey. He praises sparingly, and records no saints in his pages; it is all a question of relative blackness. But it is noticeable that what praise he does bestow is nearly all devoted to men of swift and violent action, such as Zizka, Procop, or Scanderbeg, who fought a losing cause, but fought it with such vigour that it almost appeared victorious, and who had little time for the labyrinthine methods of fifteenth century diplomacy and guile. His deepest contempt is for such inanimate creatures as the Emperor Frederick III, or Charles VII of France, of whom he says that, even after France had been excused, by the Church's rehabilitation of her, for accepting the help of Joan of Arc, he "continued to behave as though anxious to prove that his bygone association with a good woman had been a youthful indiscretion for which he wished to atone."

He adds to Macaulay's dictum, that the papacy strove to take and use to its own advantage all such manifestation of genius as could be covered with a veil of orthodoxy, by his picture of Nicholas V following the traditions of his office, and realizing that the learning, acumen, and wit of the Humanists could, by judicious patronage, be turned to the greater glory of the Roman Church.

The fifteenth century occupants of the papal chair are not left with many shreds of good character, although the author has more sympathy with the open evil-doer than with the hypocrite. As he points out, there was an enormous amount of cant at that time in religious and secular affairs; in chivalry, in the practice of religion, both by cleric and layman, and in certain aspects of Humanist scholarship. For reactionary ideas based on the remote past he has no use, as is shown by his dislike of the Italian classic architecture of the period and the literary return to Ciceronian Latin. This, in Waugh's opinion, killed the living medieval Latin language, and with it our only chance of a practical universal European language; but here perhaps that great medievalist, Mr. Coulton, would take issue with him. In fact the whole accepted theory of the fifteenth century Renaissance receives a severe shaking at his hands, and with what is left Constantinople is allowed to have nothing to do.

It is difficult, if one has a particular interest at heart, not to allow it to usurp more than its share of space, and it does appear that the author's fondness for ecclesiastical and Hussite affairs has led him to give them more prominence than they should occupy in a book of this scope. But this is not of great importance and the wonder is that in spite of its compressed subject-matter the book is so readable.—HELEN HAGUE.

UNCERTAIN GLORY. By Regina Lenore Shoolman. The Ryerson Poetry Chap-Books, Toronto, 1932. Pp. 8., 50 cents.

These verses, by a graduate of the class of Arts '29, who subsequently held a scholarship for post-graduate research in France, are decidedly romantic: they deal in such things as dawn, ecstasy, monotones, autumn, woods, trees, tempests, and requiems. In a word, Miss Shoolman eschews the brittleness of the moderns for the softer effects of—if not the ancients—shall we say, the near ancients? There are technical faults, an occasional straining for rhyme, and an imagery that is filled with echoes of time-worn images. But now and again, a turn of the phrase reveals a sensitive and eager mind. It is a good first effort in a country in which poetry at its best is forced to shift for itself. And for McGill graduates it may have the additional interest of being one of the singularly few publications emanating from a graduate of the Royal Victoria College.—LEON EDEL.

SIX THOUSAND CANADIAN MEN: 44TH BATTALION C.E.F. By E. G. Russenholt. De Montfort Press, Winnipeg. 364 pages. $4.00.

48TH HIGHLANDERS OF CANADA, 1891-1928. By Kim Beattie. Southam Press, Toronto. 434 pages, $3.00 .

HISTORY OF THE 16TH BATTALION, C.E.F. THE CANADIAN SCOTTISH. By Lieut.-Col. H. M. Urquhart, D.S.O., M.C. MacMillan Co. of Canada, Toronto. 853 pages, $10.00.

A SHORT HISTORY OF THE ROYAL CANADIAN DRAGOONS, 1883-1932. By R. C. Fetherstonhaugh, from material compiled by the late Major T. A. James, R.C.D. Southam Press, Toronto. 52 pages, $1.00.

These books represent the additions made to the shelf of Canadian regimental history in 1932, in the order in which they appeared. The first three are full regimental histories, well written, excellently printed, handsomely bound, and including maps and illustrations. The fourth is definitely a short history, designed largely for distribution within the Regiment concerned, to bridge the gap until a more comprehensive volume can be arranged for.

Capt. Russenholt, in his book, has tried the interesting literary experiment of writing throughout in the present tense. This is a distinct departure in Canadian military histories and it has succeeded in this instance, but in less skilful hands monotony would have resulted and the danger is so acute that the experiment will not likely be repeated.

Mr. Kim Beattie's volume covers briefly the history of the 48th Highlanders of Canada previous to 1914 and subsequent to 1919, but is, for the most part, the history of the 15th Battalion, C.E.F. Col. Urquhart's book, the most comprehensive Canadian unit history yet written, completes the set of histories covering the four battalions of the 3rd Canadian Infantry Brigade, giving to this brigade the distinction of being the first in the Canadian Corps to have the stories of its component battalions so recorded.

No year previous to 1932 has seen the publication of three Canadian regimental histories setting so uniformly high a standard, and the regiments concerned are to be congratulated on the successes the earnest efforts of their historians have achieved.—R.C.F.

PERSONALITY, MANY IN ONE: AN ESSAY IN INDIVIDUAL PSYCHOLOGY. By James Winfred Bridges, *Professor of Abnormal Psychology, McGill University*. Boston, The Stratford Company, 1932. P. vi-215, with bibliography and index. $2.00.

Professor Bridges, author of this volume on personality, is a graduate of McGill and Harvard. He belongs to that generation of psychologists which had its first lessons in psychology from professors of philosophy. One suspects that, in his heart, he still considers psychology as a field of investigation whose conclusions are valuable only to the degree that they may be used in formulating a philosophy of life. By his own confession, he is a "liberal" in psychology. By this he means, I believe, that he regards psychology somewhat in the way mentioned above, and that he is not an adherent of any of the many new "schools" of psychology, but prefers to draw materials from whatever source they may come and without accepting the conclusions of the persons who offer them.

It is in keeping with this view that the terminology of the present work is that of the older psychology, rather than of the purely physiological or experimental psychologist on the one hand, or of the social psychologist on the other. This is not to say that the author has not here and elsewhere dealt with the methods and findings of these newer psychologists. He has done so; and has done it with a pleasing, cool attitude of criticism. It is well that he reminds us that the "conditioning" of physiologists and behaviourists is but our old friend "association" described in a new way. Many readers will be grateful for the opportunity to read of the findings of more recent psychology in a vocabulary that they can understand; they will also be relieved to learn that the problems of the newer psychology are essentially those of the older.

Since human beings are so made, that they must take all of themselves along when they go anywhere and that when they die "they die all over," they demand of psychology that it regard them as behaving wholes, and that it deal with the several parts only as an aid in understanding the whole. That is another way of saying that each human being has a fate. Therein lies the essential theme of this book on personality. The author reminds us again that a personality is a work of art; he might have made the figure even more striking by saying that it is like a great piece of architecture which, once built, remains on the landscape for better or worse. It is irrevocable.

Toward the end of the book, after an inclusive treatment of various attempts to classify and account for difference of personality, the author presents what seems to be his own classification. There are 1 undeveloped, 2 over-compensated, and 3 unfolded personalities. These "unfolded" persons "give due weight to the irrational aspects of human nature. They are rational, but they are likewise sufficiently reasonable to allow affects and impulses a place in the scheme of things." This type evidently lies close to the heart of the author. A German Catholic psychologist recently said of a similar conception that it was essentially that of Thomas Aquinas' "good man;" that of a person with no illusions about his own nature or about the nature of the world he lives in, willing to take the consequences of his own actions, an artist in adjusting himself to the tough facts of life. The reviewer has a full measure of appreciation for these "golden mean," "unfolded" and artistic conceptions of human personality. He would, however, remind the people who frame them that the realities of the outside world are sometimes elusive; especially so in times of accelerated social change. This "unfolding" individual may have his unfolding rather brutally interfered with by the outside world, even by the people who are closest to him. Equanimity in the individual is perhaps more dependent upon equilibrium in the outside world than we are yet aware.

In closing, it might be said that this book is primarily an antidote, and a good one. It is an antidote to the various types of psychological quackery, which promise to make a new man overnight. That is, however, much less important than its counter-action to the scepticism of many people with regard to the importance of the hidden and forbidden corners of the human mind.

—EVERETT CHERRINGTON HUGHES.

Basic English*

And International Development.

By C. K. OGDEN, M.A.
(Magdalene College, Cambridge)

BEFORE the Great War, it was clear to most persons with a knowledge of history and an interest in international organization that one of the chief needs of Europe was fifty more dead languages. Every year the Earth is getting smaller, through the discoveries of Science; but there are still more than 1,500 languages in use in the different countries which the Radio, the Telephone, and Advertisement in all its forms have suddenly put in touch with one another. In fact, the experience of the past ten years makes it possible to say with some chance of agreement, at any rate from men of science, that the chief need of our time is 1,480 more dead languages.

Even today, it is hard to get a working knowledge of more than three or four, so 20 would be more than enough (in schools) to keep teachers at work; and men of letters would be quite happy with over 2,000 (in libraries).

In a year or two it may be possible for voices in China or Peru to come through quite clearly to any Canadian working man with an apparatus about the size of a hat and at a smaller price than the present small gramophone. Twenty or thirty years back it was possible to put together a language based on European roots in the belief that it might one day become international; but now that the East is fully awake, and in the very front of our political picture, such an idea is foolish.

English is to-day the natural language, or the language of the Governments, of over 500,000,000 persons. It is part of the school system of countries with interests so widely different as Japan, the Argentine, and Estonia; it is the language of the talking pictures and of over 600 Radio stations; and experts in all countries have for a long time been of the opinion that if only it was simpler it would quickly become international for trade and for all other purposes.

Basic English is this desired simpler form; for, in it, 850 words do all the work of 20,000, though to the eye and ear it seems in no way different from normal English. The complete word-list goes on the back of one bit of business note paper, and takes only 15 minutes on a sound record. In theory, anyone with no knowledge of English might get it into his head in less than 24 hours; but it is wiser to take two hours a day for a month, giving one hour to the words and the other to word-order and to the 250 necessary special uses ('idioms') which make the natural effect of everyday talk possible.

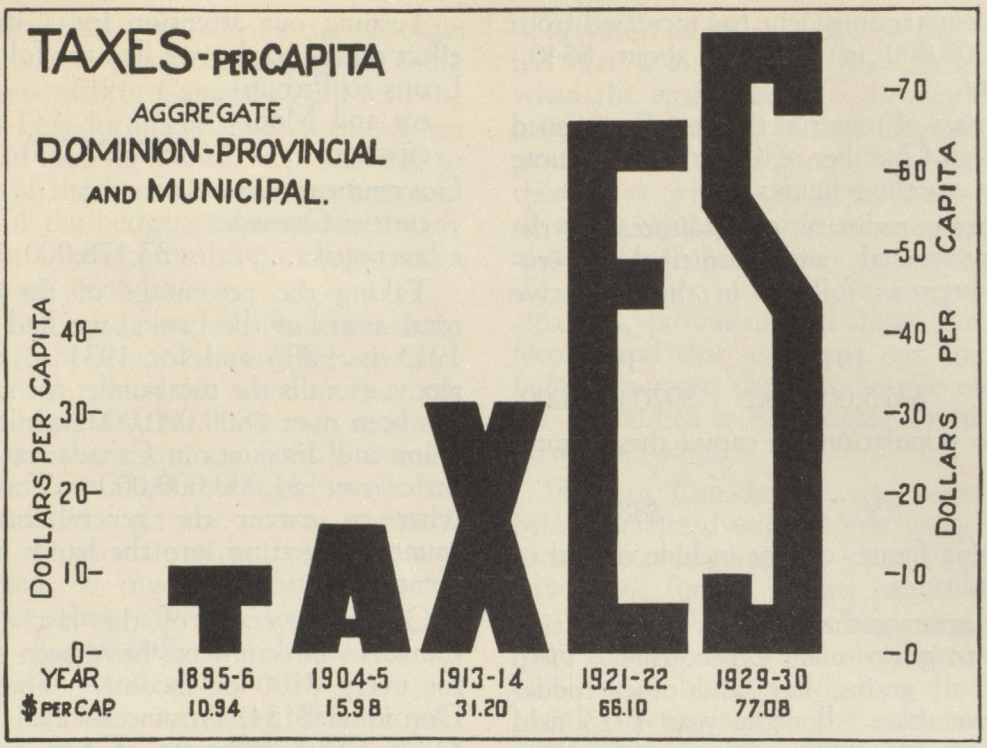
Leonhard Frank's complete story *Carl and Anna*, when put into Basic, is said by Mr. Lloyd James to have new qualities of value, because of certain effects produced by its simple form. Another good example is *The Gold Insect*—Edgar Allen Poe's story, "The Gold Bug," in Basic.

In science, such effects are equally possible, as may be seen from the pages in Basic at the end of Mr. Crowther's *Osiris and the Atom*. But they are less important, because in science the chief need is to get the sense clear without troubling about the details in which men of letters are interested; and that is what Basic is designed to do. With the addition of 50 words for any branch of science, and 100 words needed for general science, the field of knowledge may be completely covered for international purposes. At a higher level, different in every branch, international words are ready to hand; and Basic is the quickest way of getting to that level.

The need for making the discoveries of science international is not seriously questioned; but it might be 1,000 years before the necessary language was produced by the process of natural selection. A strong attack on the forces of reaction is the only hope; and with the right organization on the lines of the International Bureau of Weights and Measures, the work might be complete while some of us are still living.

In *Basic English Applied* (Science), examples are given of the way in which Chemistry, Physics, and Biology may become international through Basic, which has the support of Sir Richard Gregory, Dr. Sven Hedin, Professor Elliot Smith, Professor Julian Huxley, Professor Lancelot Hogben, Professor Nemec (Prague), Mr. H. G. Wells, Mr. Bernard Shaw, Professor Herbert Davis (Toronto), Herr Augermund (Deutscher Lufthausa), Dr. Okakura (Japan), and 40 or 50 other authorities in all countries.

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THE GROWTH OF DOMINION, PROVINCIAL AND MUNICIPAL TAXES IN CANADA, 1895-1930

This graph strikingly reveals how taxes have mounted in recent years. Starting at $55,000,000 in 1895-96, the total reached $772,969,645 in 1929-30, the final figure representing $77.08 of taxation for each inhabitant of the Dominion.

The Burden in Canada of Governmental Debts

By GEORGE C. McDONALD, ARTS '04

(With diagrams presented through the courtesy of The Canadian Chamber of Commerce.)

WHEN I was asked to prepare this article for *The McGill News*, it was suggested that the title for my remarks should be "The Burden in Canada of Governmental Debts." This title is, perhaps, a little narrow, but I can probably bring all I want under it. I would like also to refer to the amount and manner of our spending but, after all, the ominous feature of the situation is the total of the debt. It really doesn't matter how much we spend, so long as we have the money, but when we are spending money that we have to repay, or somebody else has to repay, at a future date, it behoves us to give thought to the serious situation that is developing.

It is well known that the Canadian Chamber of Commerce is doing research work on this subject and is spreading information for the purpose of enlightening public opinion. It is with the idea of assisting in this programme that I am writing these lines. I propose to quote from some of the figures that have been produced through this research work, and I shall also refer to other sources from which light has been thrown on this subject.

First of all I shall refer to an article in a recent issue of *MacLean's Magazine*, entitled "Quebec's Mounting Government Costs," by C. L. Sibley. This shows that the expenditures of the Provincial Government, municipalities, and the educational institutions in the last year of the War were $80,000,000. Now they are spending $250,000,000

a year. The outstanding debt has increased from about $250,000,000 in 1913 to about $540,000,000 today.

From the mass of material that has been issued by the Canadian Chamber of Commerce, I quote the following startling figures:

The aggregate ordinary expenditures of the Dominion, provincial, and municipal governments have been as follows in the respective years:

1904	1913	1931
$120,000,000.	$275,000,000.	$920,000,000.

Adjusted to population per capita these figures would be:

$19.08	$36.72	$88.68

The foregoing figures do not include capital or special expenditures.

Another illustration that is given is the relation of field crops to government expenditures. Field crops include all grains, hay, and other fodder crops and vegetables. For the year 1913 field crops were $552,000,000, and government expenditures $275,000,000. In the year 1931 field crops were $425,000,000 and government expenditures $920,000,000. 1931 was a year where the return from field crops was unusually low, but if you take an average for the years 1927-1931 you get a figure of $866,000,000, which is still less than the government expenditures for 1931.

In 1931, when government expenditures were $920,000,000, the total amount of income assessed by the Dominion against individuals for the purpose of Income War Tax was $815,714,684. You will therefore see that neither the income of people, assessed for tax purposes, nor the field crops were of themselves sufficient to provide funds to meet the government expenditures in 1931.

The gross debts of governments per capita have increased from about $130 in 1913 to over $500 in 1931. While Dominion and municipal ordinary expenditures have been about equal and have increased equally between 1913 and 1931, provincial expenditures, although smaller, have been increasing more rapidly over the last twenty-five years. The gross debts of governments on the other hand show that, while in 1913 municipal debts at $416,000,000 were comparable to the Dominion debt at $483,232,555, in 1931 they had dropped far behind at $1,430,000,000, compared to $3,348,975,668 for the Dominion. In the meantime the provinces, starting from behind at $178,000,000 in 1913, had reached $1,276,629,288 in 1931, almost catching up to the municipalities.

Turning our attention for a moment to the effect on the banks, we find the following figures:

	1913	1931
Loans to Provinces and Municipalities.....	$40,423,000	$147,042,000
Government Securities Owned averaged.....	33,178,000	609,218,000

Taking the percentage of the above to the total assets of the banks, we find the figure for 1913 is 4.8% and for 1931 it is 24.6%. In recent months the total under the above headings has been over $800,000,000, while other current loans and discounts in Canada have been only a little over $1,000,000,000. This indicates to what an extent the general business of the country is getting into the hands of the governments.

On the average of the last eighteen years, Canadian governments have been spending $134 for every $100 of income. These figures are: Dominion $134, Provinces $152, Municipalities $124. This difference of $34 has been added year by year to the debt.

In 1931 the Dominion Government paid in interest on debt $121,289,844, which was greater than the whole amount of the consolidated fund expenditure in 1913.

Everybody will, of course, realize that this growing debt has arisen from two sources:

Borrowings for new capital expenditure and
Borrowings to make up revenue deficits.

It seems reasonable that certain expenditures can be considered as repayable over a period of years. I refer to:

1. Emergency expenditures such as War, and perhaps I might even say unemployment relief; and
2. Capital expenditures which can be repaid over the life of the asset.

There must, however, be reason in the time to which such debts are deferred. The extent to which succeeding generations will submit to such piling up of debt is a question. Off-hand, I am not sure that it wouldn't be a good rule that all funded debt should be amortized within a twenty-year period. Such a rule should result in a much better class of bond than we have known.

It is suggested that for a governmental debt a fair average might be liquidation within twenty, twenty-five, or thirty years.

Anybody who has studied the figures I have quoted above must realize that we are confronted with a situation requiring our most careful consideration—one which, in my opinion, leads

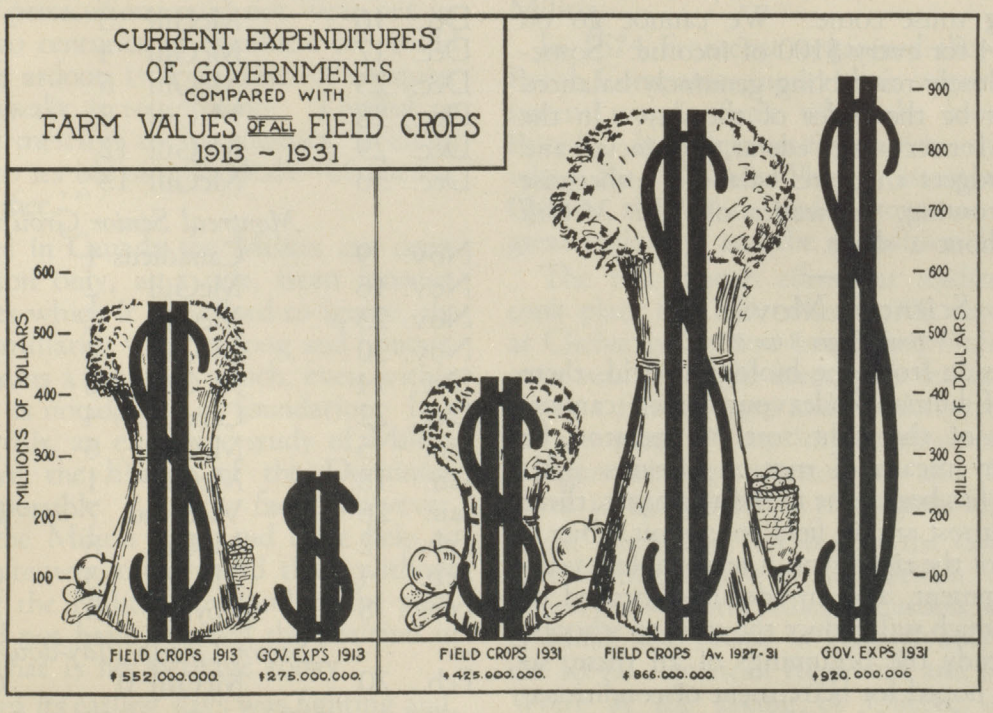
to the conclusion that very definite action must be taken. I think it would be a splendid thing if all the business men of Canada would read the May Report. This document shocked the leaders of Great Britain into the drastic steps that led to the formation of the Coalition Government and the balancing of the budget; steps which already have resulted in a more promising outlook and a greater feeling of confidence.

I think that in Canada we still need something of that nature to open our eyes to the very dangerous situation in which we stand. The only reason that municipal debts have not increased to the same extent as provincial and Dominion debts lies in the fact that municipal credit has been more restricted. At the present moment, municipal and provincial credit is very considerably restricted, so much so that there is a greater tendency than ever to lean upon the Federal credit. I, personally, am doubtful if the Federal credit can stand much more.

If our debt had been increasing only proportionately to the growth of our population and wealth, there would be no occasion for alarm, but when we have to take into account the new factor of increasing government enterprises of all sorts, the old-fashioned yardstick fails us and we really don't know where we are at. We shall know, however, when the pressure to pay these debts arrives.

Private business has had to face the music. It has been a question of "root, hog, or die," and when the worst came to the worst there was a process of bankruptcy that individuals and companies could go through. There are cases in these days where the depreciation in the value of assets, among other reasons, has allowed no alternative to bankruptcy proceedings. I suppose the Bankruptcy Courts are also open to municipalities, provinces, and states, but I hesitate to recommend that as a way out, and in any case I don't suppose that the League of Nations has yet established a Bankruptcy Division, however great the scope.

Here in Canada we are, perhaps, gradually being socialized without our being aware of the process that is going on. The Western Provinces have gone further in this respect than the East, but I believe in criticism beginning at home, and there is ample scope for us to exercise our critical faculties at home. We have not gone in for social experiments to the same extent as some others, but we have done our share in building roads and bridges; and I think we have somewhat lost our sense of proportion through the large profits made from government sale of liquor. These profits have induced some extravagant habits—such habits as have a tendency to persist even after the profits have gone or are very much reduced.



GOVERNMENT EXPENDITURES AND FIELD CROPS

In 1913 the value of field crops in Canada was twice the total of all Government expenditures; in 1931 Government expenditures exceeded the value of field crops by $495,000,000 and exceeded the average of four years 1927-'31 by $54,000,000.

Take a practical example of the question of repayment. Probably one of the greatest sources of increased borrowings for provincial purposes in recent years has been for improved roads. Are we any more satisfied with the roads we have now and the use we want to make of them than the people in our places twenty years ago were with their situation? Is it reasonable for us to think that twenty years hence the people in our places won't be wanting to spend money just as freely as we have, and will they be pleased if there are any of our debts still outstanding?

I don't know that I have any solution to offer to these questions, but I have some suggestions to make. The fault, if any, lies with ourselves, in that we do not individually take sufficient interest in our governments. How many of us bestir ourselves, when the time comes for municipal elections, to see that we get a good alderman for our district and a good mayor? How many of us give any thought to municipal affairs and the manner in which our municipality is governed? The same holds true of our interest in provincial and Federal government matters. We are told that the Provincial debt has this year increased by $6,000,000, but who knows whether that is represented by additional assets, capital, or otherwise? How many of us ever study the government statements? More discussion would certainly help the public to a better understanding.

And it is not too much to say that a better understanding must come. We cannot go on spending $134 for every $100 of income. Something more closely resembling genuinely balanced budgets must be the order of the day. In the responsibility for securing Federal, provincial, and municipal budgets that are balanced, otherwise than by borrowing, no reader of *The McGill News* is without a share.

Scientific Movies

(Continued from Page 28)

the least. Aside from the biological field, there is no field of human endeavour which cannot, in the hands of the right sort of operator, be illuminated by means of motion pictures. Although much has been done in the aggregate, there remains an almost virgin field to exploit. But it requires men of the right type, a reasonable investment in equipment, and an adequate method of distribution which will reduce the costs to schools. We have already the beginnings of all these, so that with the hoped for betterment of conditions, more use may be made of these advantages to education.

Just as I send this to the Editor of *The McGill News*, at his request, a Toronto colleague is visiting me to discuss the question dealt with above. In the course of conversation, he mentioned having seen four years ago in Boston some interesting and instructive motion pictures of Amob Amoeba and mentioned details which he vividly remembered. His descriptions were detailed enough to enable me to tell him still further details of the film he described. I was not a little flattered by the fact that it was a film made by myself, and the experience demonstrates how well the mind is impressed by a suitable motion picture.

*Radio address delivered over Station CKAC under the auspices of the Graduates' Society of McGill University, December 2, 1932.

Athletics

(Continued from Page 21)

In the Montreal Senior Group McGill's play was outstanding, the team finishing the regular schedule in a tie for first place with Canadiens and continuing into the play-offs which are under way as these lines are written. A striking impression of the successes the McGill team attained is conveyed by the results listed below.

Canadian Intercollegiate Championships

Dec. 6	McGill	5	Montreal	1
Jan. 14	McGill	2	Toronto	2
Jan. 30	McGill	4	Toronto	2
Feb. 16	McGill	4	Montreal	1

International Intercollegiate Exhibitions

Dec. 16	McGill	3	Yale	0
Dec. 17	McGill	4	Harvard	2
Dec. 23	McGill	5	Harvard	2
Dec. 28	McGill	8	Dartmouth	2
Dec. 29	McGill	12	Dartmouth	3
Dec. 30	McGill	13	Dartmouth	1

Montreal Senior Group

Nov. 9	Canadiens	4	McGill	3
Nov. 16	McGill	2	Columbus	1
Nov. 23	McGill	2	Victorias	1
Nov. 30	McGill	2	Royals	1
Dec. 14	McGill	10	Columbus	0
Dec. 22	Canadiens	4	McGill	2
Jan. 5	McGill	6	Royals	1
Jan. 18	McGill	1	Canadiens	1
Jan. 26	Victorias	7	McGill	4
Feb. 2	McGill	8	Victorias	2
Feb. 4	McGill	3	Columbus	0
Feb. 8	Royals	5	McGill	3

Senior Group Play-down

Feb. 20	McGill	0	Canadiens	0

Senior Group Play-offs

Mar. 1	Royals	3	McGill	0
Mar. 3	McGill	2	Royals	0

Royals won the championship, 3-2

Highlights in the History of the Canadian Militia

By COL. C. B. PRICE, D.S.O., D.C.M.
(Commanding the 12th Canadian Infantry Brigade, Montreal)

FEW of those who from time to time witness the march of a Militia battalion through the streets of any Canadian city or town, or read in the papers brief accounts of the training of Non-Permanent Force artillery, infantry, and other units in drill sheds, armouries, or summer camps, have more than a faint conception of how the Militia, apart from its devoted service in the Great War, has faithfully served Canada for well-nigh three hundred years. In an epilogue to his History of the British Army, Sir John W. Fortescue notes that elsewhere in the Empire full appreciation of what the soldier has contributed to the welfare of the people is similarly lacking, but there is compensation for any public ingratitude in his own tribute, which reads in part as follows:

> "And the historian of the dim future, summing up the whole story, may conclude it in some such words as these: 'The builders of this Empire despised and derided the stone which became the headstone of the corner. They were not worthy of such an army. Two centuries of persecution could not wear out its patience; two centuries of thankless toil could not abate its ardour; two centuries of conquest could not awake it to insolence. Dutiful to its masters, merciful to its enemies, it clung steadfastly to its old simple ideals—obedience, service, sacrifice.' "

Though here in Canada the Militia can complain of derision only, as a rule, from inconsequential sources which it can afford to ignore, the charge of unfamiliarity with its long and honourable story remains a reproach which, even within its own ranks, is not devoid of foundation. In a paper such as this, an extensive study of Militia participation in the history of the Dominion would be impossible. A few facts, however, stand out in the Militia story and these help to explain the statement often heard that, without the services of the Militia now and in the past, Canada would not have attained the position in world affairs that is her heritage today.

Canada, from its earliest days was fighting and, when it became British, it started life as a military colony; consequently a history of its forces is, in many respects, a history of the Dominion.

Under the French régime, there was a fully constituted Militia which fought with the regular troops against the Indians and the British American colonies to the south. In 1649, in order to meet an attack by the Iroquois, the first call was made on the inhabitants for military service. After this the inhabitants were organized into squads of militia with officers and corporals in command of each squad. A uniform was adopted consisting of a long blue coat, with caps and sashes of distinctive colours: red for Quebec, white for Three Rivers, and blue for Montreal.

There were no French regular troops in Canada until a few years after this, so in its earliest infancy, as at the present time, the country depended entirely on its citizen forces for defence.

The first French regular troops to arrive were the famous Régiment Carignan-Salières, which was disbanded in 1669, when seigneuries were granted to many officers of the Regiment. In 1759 the French forces in Canada, consisted of 7,000 regulars and 15,000 French-Canadian Militia.

In 1674 Frontenac organized the Militia into Parish Companies, under their seigneurs, and this system was in force when the country became British. It is interesting to note that in 1690, when Sir William Phipps attempted to take Quebec, the Militia under Frontenac fought with great gallantry, and the expedition failed.

The first British efforts at soldier settlement took place in 1749, when 4,000 veterans landed at Chebucto Bay and established Halifax. Every man was given 50 acres, plus ten acres for each child, a free passage, and freedom from taxation for ten years. They formed three companies of Rangers amongst themselves and did splendid work in the troublous times that followed.

An interesting fact is that the famous King's Royal Rifle Corps of the British Army, with which the Victoria Rifles of Canada, of Montreal, is allied, was raised in Pennsylvania in 1756 as the Royal American Regiment and fought under Wolfe at the taking of Quebec, winning its motto "Celer et Audax" in the unsuccessful attack on the Beaufort Flats in 1759. It fought on the side of the Crown in the American Revolu-

tion, after which it was absorbed into the Army as "The Sixtieth."

The French-Canadian Militia fought alongside the regulars at the Battle of the Plains of Abraham and played a worthy part.

The first British Government in Canada was a military one and the Militia system, instituted by Frontenac, was adhered to in its main details.

Pontiac, the chief of the Ottawas, rose against British rule in 1764 and about 300 French-Canadian volunteers took part in the successful expedition sent against him.

1775 was a dark year for Canada; the whole of the country, except the city of Quebec, was in the hands of the American Revolutionists. Only 1,178 men, including regulars and Militia were available for the defence of Quebec, but under the inspiring leadership of Sir Guy Carleton, who had escaped out of Montreal when it was occupied by the Americans and slipped into Quebec through the lines of the besiegers, all attacks were repulsed. In the spring reinforcements arrived from England and the invaders were completely driven out of Canada by July, 1776.

In 1777 an ordinance was passed making all males between 16 and 60 liable for service in the Militia, and it is interesting to note that practically the same law is in force at the present time.

At the close of the War of Independence, Upper Canada was settled by the U. E. Loyalists, and Col. Simcoe, the Governor, organized the Militia on the same lines as in England, the Lower Canadian Militia remaining under the seigneurs.

On the outbreak of the war of 1812, the Militia was greatly increased, and did valiant work in assisting the few regular soldiers in the country to repel the invaders.

In Upper Canada, Sir Isaac Brock, after some initial difficulties, welded the Militia into a formidable force which materially helped his small number of regulars. His energy and enthusiasm so inspired his small force that, even after his death, it successfully held the Province against an army which outnumbered it by five or six to one. His influence seemed to live with both regulars and Militia and it was a rule with both that, without counting the odds, the Americans were to be attacked at sight.

Perhaps his greatest feat was in August, 1812. When in York (Toronto), he heard that a large force of Americans under General Hull, who had issued bombastic proclamations that he was going to free Canada from British oppression, was marching to invade the Province by way of Detroit. Brock marched a column consisting of 60 men of the 41st Regiment and 250 Militia overland from Burlington Bay (now Hamilton) to Long Point on Lake Erie. Here he embarked it in every species of open boat and set off on a voyage of 200 miles, along a coast which, in many places, consisted of lofty cliffs, in heavy rain and tempestuous weather, to go to the aid of Colonel Proctor at Amherstburg. Proctor, with a handful of men, was watching General Hull, who with over 10,000 Americans was at Detroit. All ranks, both regular and Militia, endured the extreme hardship with a constancy and cheerfulness beyond all praise. Here Brock met Tecumseh, who, after listening to his courageous plans, said "Hooh, here is a man!" and threw in his lot on the British side. Together they captured Detroit, over which and Fort Niagara the Union Jack flew for the rest of the war.

Stony Creek, Beaver Dams, and Lundy's Lane, although the numbers engaged were comparatively small, were bitterly contested and highly creditable to the Militia and should never be forgotten by Canadians.

In Lower Canada, the French-Canadian Militia displayed equal constancy and courage, and did splendid work, culminating in the victory against great odds at Chateauguay.

Although the Maritime Provinces were not actually invaded, the Militia in New Brunswick and Nova Scotia was embodied, which permitted the transfer of one of the regular regiments to Canada. This Regiment was raised in 1803 as the New Brunswick Fencible Regiment; in 1810 it was taken into the line as the 104th Regiment of Foot, and was recruited up to strength in the province of New Brunswick. Most of its subalterns were members of the U. E. Loyalist families. Its record during the war of 1812 was very creditable, and on the conclusion of the war it was granted the honour "Niagara" to be borne on its colours. It was disbanded at Montreal on May 24, 1817.

The march of the 104th Regiment is one of the epics in the history of military marches. On February 16, 1813, the Battalion Headquarters and the Grenadier Company left Fredericton, and were followed by one Company each day until the Light Company, forming the rear-guard, marched out on Sunday, the 21st. An unusually large fall of snow had occurred and at times during the march through the untracked woods of northern New Brunswick and Lower Canada, the thermometer fell to 27° below zero. From Fredericton to Quebec the route followed was 350 miles; after Sir George Prevost had inspected the Battalion at Quebec, he ordered it to march to Kingston, a further 360 miles.

Thus, this extraordinary march of over 700 miles was carried out, partly in the depth of winter, partly during that transition period when the heat of the mid-day sun melts the top snow and makes the going laborious, over country roads, forest tracks, and in places where no trail of any kind existed, in the surprisingly short period of 52 days. Surely as remarkable a performance as military history records.

After the close of the war of 1812, a period of stagnation set in and practically no training was done. The Militia, except on paper, almost ceased to exist; but when the rebellion of 1837 broke out, Militia regiments were reconstituted and actively trained under regular officers. In 1838 Sir James Alexander, the Inspector General, wrote to the War Office that, in his service all over the world, he had not seen a finer Militia force. One of the Regiments raised at this time was the Royal Montreal Rifles, which was afterwards disbanded.

Between 1840 and 1860 very little training was done, but a few notable regiments were formed and trained at the expense of their officers. In this period the 1st Battalion, Volunteer Militia, was raised. This Battalion is perpetuated by the Canadian Grenadier Guards, Montreal. The 2nd Battalion, Volunteer Militia, now the Queen's Own Rifles, of Toronto, and the 3rd Battalion, Volunteer Militia, which lives in the Victoria Rifles of Canada, of Montreal, were also raised at this time.

In 1864 a large training camp was held at La Prairie, of which the late Field Marshal Lord Wolseley was commandant.

In 1866 the Militia was called out to repel the Fenian Raids, and did their part well. Contrary to the general impression, the Fenians were well disciplined and were potentially formidable opponents, being largely veterans of the American Civil War.

In 1868, the year after Confederation, the Active Militia numbered 40,000. In 1870 two volunteer Militia battalions accompanied General Garnet Wolseley's Red River Expedition.

The R.N.W.M.P. was formed in 1873, and this force, together with the Permanent and Non-Permanent Militia, under General Middleton, quelled the North-West Rebellion in 1885. This was the first entirely Canadian force to take the field, and, in addition to some sharp fighting, it endured a march across the ice on Lake Superior in March, no mean feat.

In 1899, the Militia supplied a large part of the officers and N.C.O.'s for the force of over 8,000 men supplied by Canada for the South African War, and the great part played by those men in that campaign is a familiar story.

The Canadian Corps in the Great War was built up on a frame-work of Militia trained officers and N.C.O's, amplified by a generous sprinkling of Imperial regular officers and N.C.O's Without the Militia, this wonderful Force, which decisively contributed to the final victory, would never have been possible.

This short paper, dealing only with the Militia, has not done justice to the large number of British regular regiments which served in Canada from the conquest up to Confederation. One hundred and five British regiments served in Canada in this period; under their protection Canada grew into a nation, and without them we would have ceased to exist; but at every crisis the Militia rallied to the cause, and fought shoulder to shoulder with their regular comrades. At certain times, as in the War of 1812, even the devoted courage of the regular troops would not have sufficed to save the country without the aid of the Militia.

The Militia has been called out on an average of once in every 15 years since 1649, when the first French-Canadian units were formed; and it will in the future, as in the past, respond to all calls on its loyalty and devotion.

Basic English

(*Continued from Page 32*)

The early suggestions of Wilkins and Leibnitz have been responsible for two of the most important later attempts in this direction. The first was that of Bentham, whose work on Fictions in relation to the structure of English was chiefly done in the year of Waterloo; and in 1910 came the work by Couturat, Jespersen, and Ostwald, who were then supporting Ido. Ido was better than other systems of the sort; but it is now almost dead; and some form of English is clearly the only way out.

The question has not come up for discussion for over ten years. In 1921, a British Association Committee was on the side of a language based on European roots; but the arguments for a simple form of English such as Japan and Scandinavia are now supporting were not then before it. It is time for another Committee, representative of all opinions, to take into account the tendencies for which the events of the past ten years have been responsible.

For help at every stage in the work Jeremy Bentham's *Theory of Fictions* was of the greatest

value, and the first step forward came when it was seen that he was right in his ideas about the way in which the names of operations and directions may take the place of 'verbs.' Over ten years were needed to get the system into working order, and the A B C, for teaching purposes (to be put into all languages), was printed only last summer.

In this connection, it may be noted that those who have not given much thought to language are frequently in error as to the number of words used for the purposes of normal education. Even the Kindergarten babies have between 2,000 and 3,000 separate word-forms, and Thorndike has given us a list of the 20,000 most frequently used in books produced for the young. Every reader of these pages has at least 25,000 words ready for all purposes, and there are more than 7,000 so common that they might any day be seen in advertisements or headlines designed for the general public. So statements in the papers, saying that we may get on happily with 500, are based on the chance ideas of some office-boy, trained, possibly, in the school of Max Muller! All this makes the value of a word-list limited to 850 units very clear.

For the expansion of Trade, for the organization of Peace, and for the development of Science, an international language is at least as important as the gold question; and if it is true that men of science are in touch with less than 10 per cent. of their public, it is very much more important in the long run.

The reader may or may not have been conscious that this account is itself all in Basic English; that is to say making use only of the 850 words in the list printed at the front of all the books in which the different parts of the system have been made public. These are *Basic English* (a general account), *The Basic Words* (details of the 850), *The Basic Dictionary* (the 7,500 commonest words put into Basic), The *A B C* and *Basic by Examples* (for teachers), *The Basic Traveller* (for all purposes), *Brighter Basic* (for those who are tired or sad), *Debabelization* (opinions from all countries on the international language question, with the argument against Esperanto) and the others whose names were given earlier. Any of these may be had (price 50 cents) from The Orthological Institute, 10, King's Parade, Cambridge, to which any questions (with stamped letter-cover if an answer is needed) or suggestions may be sent.

*Adapted by the author for presentation in *The McGill News* from an article which has appeared in the scientific magazine *Progress*.

The High School of Montreal: Its Origins and Early Problems

By THE REVEREND ELSON I. REXFORD, ARTS '76, M.A. '02, LL.D. '04.

(*Former Head Master of the School*)

WHEN the British settlers came to Canada after the Cession, they brought with them a deep appreciation of the value of education for their children. Moreover, they soon discovered that under the old régime very creditable progress had been made in providing educational facilities for the French settlers, and also, to a limited extent, for a section of the Indian population. These schools, however, were Roman Catholic and French in their organization and management, and it was, therefore, impossible for the English settlers to make much use of them for their children.

This condition was favourable to the development of voluntary schools; we therefore read of private schools under the control of individual masters; church schools in connection with the several congregations; and co-operative schools under the management of a committee representing a group of citizens. Though some of these schools were encouraged by government grants, the citizens were compelled to wait until the middle of the next century before they were provided with a system of government schools maintained by taxation.

Apparently the earliest co-operative scheme in English education in Montreal is referred to in the minutes of the Society for the Propagation of the Gospel, in a letter of December 15, 1773, stating that "the Protestants of Montreal are

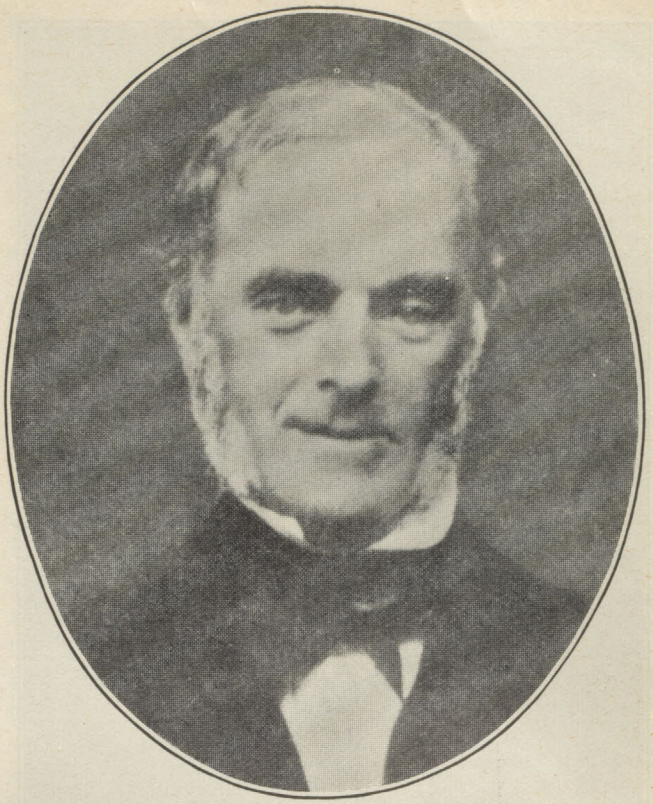
establishing an English School and providing a school building. They have engaged Master John Pullman as teacher, and have sixty scholars." Mr. Douty succeeded Mr. Pullman. Rev. John Stuart was also master of this "Public School," and evening preacher at Christ Church, from 1781 to 1785, when he became a missionary at Kingston. The family of Mr. Stuart became quite famous in the early history of Ontario.

During this period of voluntary schools, two educational institutions developed which had a very interesting and romantic history, and exercised an important influence upon the early life of Montreal. These institutions were "The British and Canadian School" for elementary education, and "The Classical and Mathematical School" for superior education.

The years 1820-22 were eventful years in the history of Montreal which then had a population of 20,000. About this time the Lachine Canal was opened; the Bank of Montreal had recently been established; McGill University had received its Royal Charter; and the General Hospital had been founded. A group of citizens, under the influence of the Lancastrian Movement in England, decided to make more adequate provision for elementary education. An Educational Committee was organized with William Lunn as Secretary, and arrangements were made to bring out teachers from England trained on the Lancastrian plan. The Committe, however, soon disagreed, and when the first teacher, Thomas Hutchings, arrived he found himself without support and without a situation.

The young leader, William Lunn, however, proved equal to the situation, He called a meeting at his own house on September 21, 1822, and organized "The British and Canadian School Society" with himself as secretary. The new society consisted of fourteen members, five of whom were Roman Catholics. It was modelled upon the "British and Foreign School Society" with its Lancastrian system and its monitorial plan of work.

The School opened in an old building in Côté Street, with Thomas Hutchings as Head Master. A Girl's Department was soon organized under a Ladies' Committee, with Miss Webster as Head Mistress. The British and Canadian School developed rapidly and became very popular as an institution for the people. It became a distributing centre for school supplies and offered elementary training for teachers. It was under the patronage of Their Excellencies, the Earl and Countess of Dalhousie, who took a very practical interest in its work.

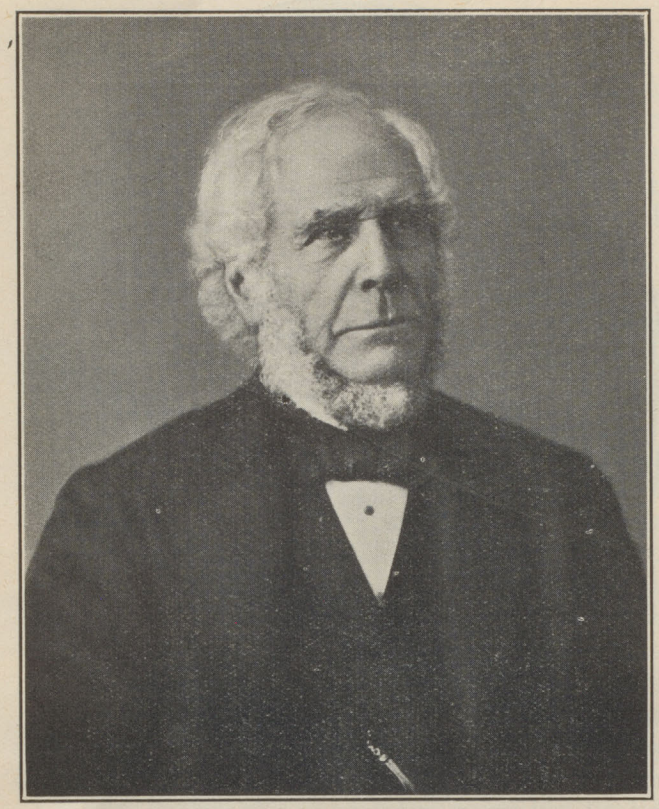


T. A. GIBSON, M.A., LL.D.

An outstanding master of the Montreal High School, 1843-1867.

In 1829 the school had the honour of a personal visit from the great English educationalist, Joseph Lancaster, whose plans and system of teaching were being followed in the school, and who had been engaged in educational work in the United States for several years. Under the fostering care and wise guidance of Mr. William Lunn, the British and Canadian School continued to render valuable educational service to the citizens of Montreal until it merged in the general school system under the Protestant Board of School Commissioners in 1866. Mr. Lunn was made secretary of the Montreal School Board in 1846, a position which he filled with great ability until 1871. In recognition of his valuable services to education, one of the Public Schools of Montreal now bears his name.

During the first half century of British occupation there was no adequate provision among English settlers for superior education. Strong representations were made to the Government in reference to this matter. In 1787 a Committee of the Executive Council was appointed, with Chief Justice Smith as Chairman, to report on the state of education. The Committee reported to Lord Dorchester in 1789 in favour of establishing academies or colleges, in which youths could be prepared for the learned professions without seeking their education in foreign parts.



WILLIAM LUNN
Secretary of the Montreal School Board, 1846-1871.
In recognition of his services to education, one of the Public Schools of Montreal now bears his name.

In 1799, the Right Reverend Jacob Mountain, Bishop of Quebec, made strong representations to the Lieutenant-Governor, Sir R. C. Milne, upon the necessity of providing schools of superior education. In 1801, a permanent committee on education was appointed, called the "Royal Institution for the Advancement of Learning," and the Crown took possession of the revenues of the Jesuits' Estates for educational purposes. In 1816, a Government Grammar School was established in each of the three cities of Montreal, Quebec and Kingston. The maintenance of these schools was to be a charge upon the revenues of the Jesuits' Estates. The Head Master was to receive a salary of £200, with £54 for rental, etc. He was also to receive the school fees, but he was required to provide twenty pupils annually with free tuition. Rev. John Leeds, M.A., an Anglican clergyman, was appointed the first Head Master of the Montreal School in 1816. After serving three or four years, he resigned his situation as Head of the School to accept the position of rector of the Parish of Christ Church, Montreal. The Royal Institution, in considering the vacancy, had their attention called to the "Classical and Mathematical School" under the able management of Alexander Skakel, M.A., whom they accordingly appointed Head Master of the Montreal Grammar School. Mr. Skakel graduated from King's College, Aberdeen, in 1797. He came out to Canada in 1799 and, on the invitation of a number of gentlemen, he established in Montreal a school for superior education which held an important place in Montreal life for many years. The merging of the Classical and Mathematical School with the Government School provided Montreal with a strong school of superior education, bearing the name and privileges of The Government Grammar School. As the school was of royal foundation, the name was officially changed in 1821 to the Royal Grammar School, which, under Mr. Skakel's able management, held for a score of years a high reputation as a classical and mathematical school. In 1845, Mr. Skakel received from his Alma Mater, King's College, Aberdeen, the honorary degree of LL.D., in recognition of his important services to education.

From 1800, when the last of the Jesuit Fathers in Canada passed away, to 1831 the revenues of the Jesuits' Estates were under control of the Executive Council of the Province of Quebec. In the latter year, these revenues were transferred to the Local Legislature. The payments to the English Royal Grammar Schools became irregular, salaries were reduced, and during the later years of Dr. Skakel's management, the efficiency and attendance of the Royal Grammar School declined. Dr. Skakel passed away in August, 1846, leaving behind him a reputation both as an educator and as a leading citizen. He took a leading part in founding the Natural History Society and Museum, and in giving courses of lectures on scientific subjects. He was also very active in establishing the Montreal General Hospital. A mural tablet and a fine portrait commemorate his services to that institution.

At the time of the union of the Provinces in 1841, the citizens of Montreal were deeply concerned about the provision of superior education for the youth of the city. The efforts of the Government had met with indifferent success, owing largely to the prejudices of the people. Provision for the establishment of McGill College had been made in 1811 by the generous bequest of James McGill and a Royal Charter had been secured in 1821; yet through dissensions and litigations the college activities were seriously retarded and the future prospects were not at all encouraging. In the meantime, however, a group of citizens, as has been noted, had established the British and Canadian School for elementary education, erected a commodious school building, and carried on a very successful work for a score

of years. The question that naturally arose was, "Why should not superior education be promoted on similar lines?" This idea was set before the citizens of Montreal in a carefully prepared announcement early in 1842. A more detailed "Exposition of the plan of the projected High School of Montreal" was issued under date April 20, 1842, signed by seven of Montreal's leading citizens. The matter was discussed for several months. At length a public meeting of the citizens was called for January 19, 1843, when Peter McGill occupied the chair. At this meeting formal resolutions were adopted setting forth the plan upon which the "High School of Montreal" was to be organized. It was to follow the plan of the high schools of Scotland. It was to be managed by a Board of fourteen directors, three of whom were appointed by McGill College. It is interesting to find the name of William Lunn on this Board. A Board of five Referees was organized in Edinburgh composed of men of high academic standing and educational experience, to whom was assigned the duty of outlining the course of study, selecting the text-books, and engaging the teaching staff.

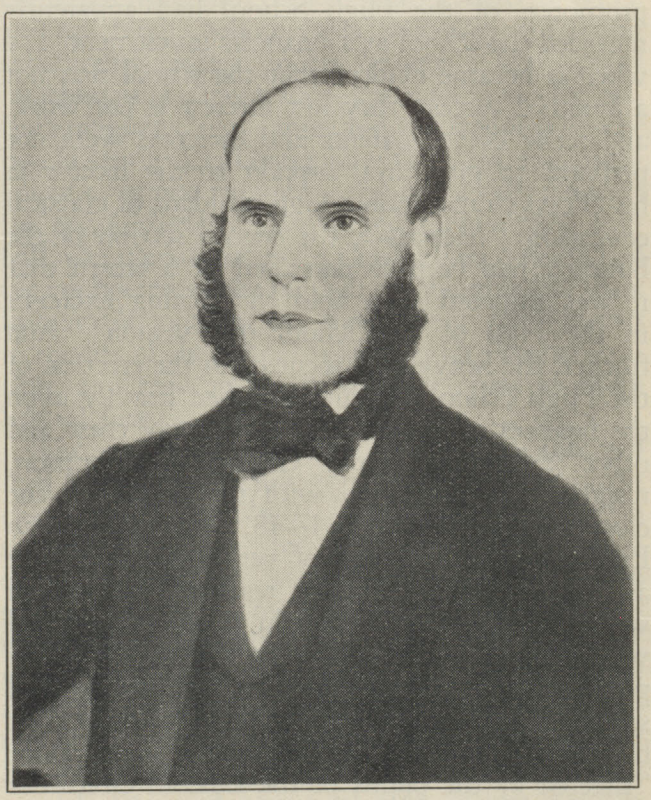
The General Board was to extend the subscription list, which had already reached a creditable sum, to secure a suitable building, and to make necessary arrangements for the opening of the school in the September following (1843).

The Local Board was fortunate in securing the Bingham Building on the corner of Notre Dame and St. Denis Streets, the former home of one of Montreal's prominent families, and for a time the vice-regal residence. It formed a dignified and attractive home for Montreal's first High School.

The Board of Referees in Edinburgh, as arranged, prepared the course of study, selected the text-books, and engaged three masters of academic standing and successful experience in teaching.

The High School of Montreal was formally opened on September 25, 1843, with the Rev. George F. Simpson, M.A., as Rector. Mr. Simpson was an Anglican clergyman, a graduate of Corpus Christi College, Cambridge. His pupils describe him as a refined gentleman, good-looking, of tall massive frame, and dark, clear complexion, always well-dressed, a rigid disciplinarian, and an excellent teacher. Mr. Simpson was joined during the year by two experienced masters, T. A. Gibson, and James Belden, also selected by the Board of Referees. The school attendance soon reached 167—the full capacity of the school building. The closing exercises of this first year were held in a large hall of the Bingham Building—a former vice-regal ballroom. The Hon. Peter McGill presided and His Excellency Sir Charles Metcalfe, the Governor-General, was present and gave a special prize to Alfred Driscol, the Dux of the High School that year.

The encouraging experiences of this first session, however, were disturbed by the resignation of the Senior Master, James Belden, who disagreed with the Directors and organized a rival school called "The Montreal Academy," which was favourably known in Montreal for several years. In order to provide for increased attendance and to fill the vacancy caused by James Belden's resignation, the second session, 1844-45, opened with three new names on the staff—George H. Gordon, Madras College, St. Andrews, S. Phillips, the Classical School, Quebec, and James Bowman, also from Scotland. The High School was under the management of a Board of fourteen directors, and on March 17, 1845, it was incorporated by the Provincial Legislature. The Directors soon secured a site for a new High School building at the head of Beaver Hall Hill, now Belmont Street, and the corner-stone was laid with due ceremonies on July 11, 1845, by His Excellency Lord Metcalfe, Governor-General of Canada. The High School building, which cost $40,000,



DAVID RODGER, M.A., LL.D.

A devoted figure in the history of the Montreal High School, 1847-1875

proved to be commodious and well adapted for high school purposes. The two wings were ready for occupation at the opening of the third session, 1845-46, and the central portion of the building was completed later.

At the death of Dr. Skalel, August 1846, the Royal Institution selected the High School of Montreal as the successor of the Royal Grammar School, and an order-in-council was passed in September, 1846, transferring all the privileges of the Royal Grammar School to the Rector of the High School of Montreal. Under the able management of the Rector, Rev. G. F. Simpson, the High School continued to progress in spite of difficulties, and the attendance gradually improved until it reached 230 pupils. At the close of the session 1846-47, Mr. S. Phillips, a very excellent and experienced teacher, resigned from the High School staff and established a rival school on St. Urbain Street called "The Lower Canada College," which proved a serious rival of the High School for many years.

At the opening of the session 1847-48, Mr. David Rodger, of Edinburgh, replaced Mr. Phillips on the staff and thereafter took a leading part in the history of the High School for a quarter of a century. During this fifth session of the High School, serious difficulties gathered around the institution. Some of the original promoters of the High School had apparently regarded the school as a financial investment, and when it became evident that the school was not a financial success, they lost interest in the work; and some of the parents and directors were not prepared to give loyal support to the Rector in his efforts to maintain a high standard of classical education. Moreover, the central section of the building had been so damaged by a storm that it was impossible to hold the closing exercises in the Hall of the School this session. And further, the heavy debt incurred in the erection of the High School building weighed heavily upon the finances of the school. In view of these and other difficulties, Rev. George F. Simpson, resigned his connection with the School at the close of the session 1847-48, and returned to England, after five years of very valuable service as Rector. Mr. Simpson resumed educational work in his old city of Lincoln, where he laboured with marked success until his death in 1857. His pupils, among whom were many distinguished scholars, provided a cruciform altar tomb over his grave bearing the following inscription: "Erected by the pupils of the Lincoln Grammar School in memory of their lamented and much respected Master, Rev. G. F. Simpson, who died suddenly, April 28, 1857, aged 47."

The Board of Referees in Edinburgh selected H. Aspinwall Howe to be the second Rector of the High School of Montreal. Mr. Howe was born in Surrey, England, on July 8, 1815. He was educated in Elizabeth College, Guernsey, and at Trinity College, Dublin, and then spent several years in France, where he acquired a thorough practical knowledge of the French language, which proved of great importance to him in his new position in Montreal.

The session of 1848-49 opened with a reorganized staff, the Rector being H. Aspinwall Howe, and the Masters—T. A. Gibson, David Rodger, Anderson, McMahon, and de Montier. The new Rector soon discovered the serious financial situation of the Montreal High School. The attendance declined; and, even when salaries were reduced, there was no money for interest and repairs, after the fixed charges were paid. The High School building was soon sold at sheriff's sale, and the High School of Montreal was left without a home, and with a Board of Management that had largely lost interest in the institution. In this crisis the three masters—Howe, Gibson, and Rodger, united to save the institution. They rented the High School building, pledging one fifth of the revenues of the School. Six of the Directors provided a guarantee fund under certain limits. The senior masters submitted to a *pro rata* reduction of salaries, after the fixed charges had been paid. Under these conditions, the High School of Montreal continued its work rather as a private school, dependent upon the devotion, energy, and efficiency of three senior members of the staff, who supplemented their reduced salaries by private tuition and by receiving pupils into their homes as boarders.

As the classes of the High School furnished a large proportion of the students of McGill College, the success of the School was of vital importance to that institution. The attention of the Board of Governors of McGill was called to the unsatisfactory condition of the School by David Davidson, Esq., a member of the Board of Governors, and Secretary-Treasurer of the High School. Mr. Davidson, who was a faithful friend of the School, recommended that the School should be taken over by the Board of Governors as a department of McGill College. In accordance with an agreement made with the High School staff, the High School reopened in August, 1853, as a department of McGill College, and began a decade of most interesting history and of most successful work. The three senior masters had carried the School over a very critical five year period and placed it under the government of McGill College.

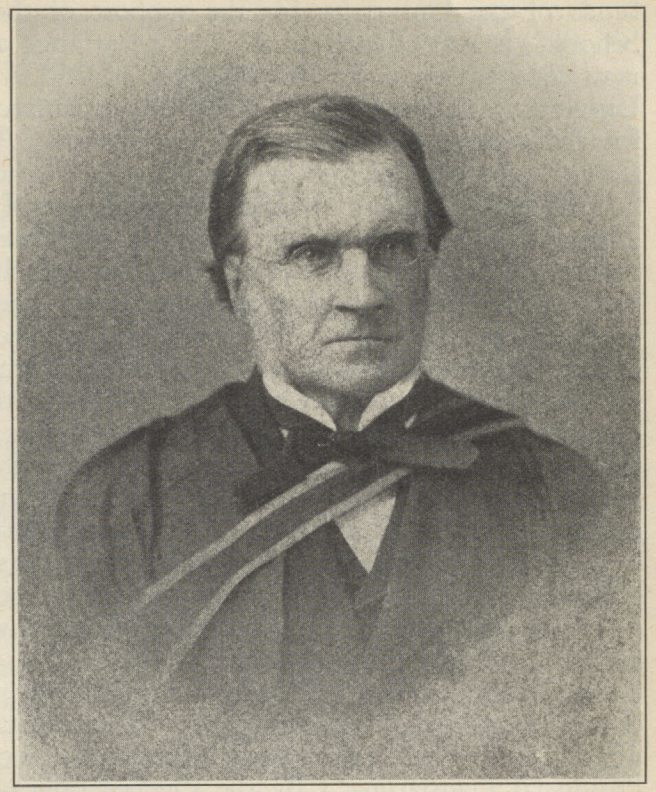
In March, 1854, the High School entered upon a new and commodious home, Burnside Hall, which had been erected at the corner of University and Dorchester Streets for the joint use of the University classes and the High School. Under the new organization, the three senior masters, Messrs. Howe, Gibson, and Rodger, and Mr. Bowman, of the preparatory class, were the main strength of the staff.

In February, 1856, Burnside Hall was destroyed by fire, and the High School secured temporary quarters in the old High School building in Belmont Street, which was being prepared as the home of the McGill Normal School. Burnside Hall was rebuilt in time to receive the High School classes in the following October (1856).

The teaching staff during this period consisted of Messrs. Howe, Gibson, Rodger, Bowman, Borthwick, and Kemp, with special masters in French, German, music, and drawing. There was little change in the course of study. Like its predecessor, under Dr. Skakel, the High School was emphatically classical and mathematical school, with special emphasis on *classical*. Some of the parents made representations that too large a portion of the school time was placed upon classics, and some concession was made to these representations.

Many interesting incidents occurred during this period, which enriched the life of the school. In 1856, Mr. T. A. Gibson, who had been a master in the School since its foundation in 1843, received the Honorary Degree of M.A. from McGill University, and the members of the staff presented him with a cap and hood in honour of the occasion. In 1857, the University conferred the degree of M.A. upon David Rodger, *honoris causa*, and the boys of the School presented him with an address and a college gown.

The session 1857-58 was distinguished by three important events. The old classification of the School into five classes was discarded, and the High School was organized under six forms, and a preparatory division. In the same year, David Davidson, that good friend of the School, announced that he would provide a gold medal annually for the Dux of the School. The Davidson Gold Medal continued to be the coveted prize of the Dux of the School for many years. It was also in 1858 that Principal Dawson announced that McGill University would conduct a system of school examinations for the senior classes of the superior schools and issue certificates to the successful candidates. These were great events in the history of the High School. Mr. William Bowman resigned his connection with the High School in 1859 and in recognition of his faithful and efficient services the University conferred upon him the Honorary Degree of M.A.



DR. H. ASPINWALL HOWE
Rector of the Montreal High School, 1848-1891

The High School was enjoying the most satisfactory decade in its history. The School building was satisfactory, the staff was efficient, the attendance was large, and the standing of the pupils in the University examinations was satisfactory. It was providing one-half of the students for the University classes, and they secured one-half the medals offered. The High School had the confidence of the public. In the midst of these favourable conditions, there were two factors in the life of the School which led to a reorganization, and this developed another crisis in High School history.

The increased attendance and the enlarged staff during this decade gave rise to many difficult questions of discipline. The Rector proposed a systematic scheme for the regulation of discipline and conduct, which would secure uniform practice in the administration of discipline by members of the staff. His suggestions, however, were not favourably received, and a rather acute situation developed among the members of the staff. Again the financial situation of the School was causing anxiety. There was an annual deficit of about $1,500, in the finances of the School, and the McGill authorities decided that they could not continue to draw upon the

funds of the University for the support of the School. It was, therefore, decided to arrange a new constitution under the direction of McGill University. A High School Board was organized for the general management of the School. A *Caput*, composed of the Senior Masters of the School, had immediate management and control, The new organization raised difficult questions concerning salaries, status of teachers, etc. which were never settled to the satisfaction of the members of the staff. The members of the *Caput*, however, deserve great credit for their self-denying efforts to save the High School from complete disorganization. Under the new régime, the former course of study was continued with minor alterations. Financial limitations made it impossible to offer attractive salaries to subordinate masters, and frequent changes of masters followed, which seriously interfered with the discipline and efficiency of the School, and this naturally affected the attendance.

The history of the High School at this point is closely associated with the Confederation Act, which assigns all educational matters to the Provincial Legislatures. By the Quebec Education Act of 1869, educational matters in Montreal were placed upon a satisfactory basis for the first time, and the Protestant Board of School Commissioners of Montreal was provided with sufficient funds to meet the educational needs of the city. William Lunn, who had been Secretary-Treasurer of the Board since 1846, continued to serve. The University authorities called the attention of the School Board to the unsatisfactory conditions under which the work of the High School was being conducted, and suggested that the High School should be incorporated in the school system of the city. After conference with the staff of the High School, a general plan for the incorporation of the School as an integral part of the educational system of the city was arranged. The School Board purchased Burnside Hall in 1870, and took over the maintenance and management of the High School of Montreal as a regular part of their school system. McGill University marked this important event in the educational history of Montreal by conferring upon H. Aspinwall Howe the honorary degree of LL.D., in recognition of his important services to education as Rector of the High School for nearly a quarter of a century.

For more than three score years the High School has continued its work under the direction and management of the Protestant Board of School Commissioners. In co-operation with the sister institution, The High School for Girls, an educational centre has been developed which holds a place among the best institutions of secondary education in the Dominion of Canada.

The history of High School life during this period is rich in interesting and important material, which should find record in another connection. The limits of this article will permit of only one or two further personal references. In 1867, Mr. T. A. Gibson, M.A., who had been connected with the High School since it was established in 1843, retired from the School and was granted a pension, which was to be a charge upon the annual revenues of the School. Mr. Gibson was a devoted and efficient teacher, the only member of the staff who had served the School from its opening session. The death of David Rodger, M.A., Head Master of the Commercial Department of the School, in 1875, made an important break with the old régime. Mr. Rodger had been a leading master in the School since 1847. He won the respect of all who knew him by his strong moral character, his efficiency as a teacher, and his devotion to duty. Few men ever gained and retained the respect and affection of their pupils as he did, His pupils raised a testimonial fund which was invested for the benefit of Mrs. Rodger. Dr. H. Aspinwall Howe continued to direct the affairs of the High School for a score of years under the new régime. He tendered his resignation as Rector of the High School in 1891. Immediate steps were taken to provide some suitable recognition of the important services he had rendered to the cause of education in Montreal. At the close of the session, the staff presented him with a fine portrait of himself in oils, by R. Harris, R.C.A., as a mark of their appreciation of his high personal qualities and of his invaluable services to the High School and to the cause of education in general. This portrait now hangs in the library of the High School. The School Board also presented an address, expressing the high esteem in which he was held by all classes of the community. Dr. Howe lived for many years, in the full enjoyment of his mental and physical powers during his period of well-earned rest.

As we review with pride the results that have been achieved in later High School history, we do well to remember that this continuous story of superior education in Montreal has been rendered possible by the self-sacrificing efforts and personal devotion of three noble teachers—Dr. H. Aspinwall Howe, T. A. Gibson, Esq., M.A., and David Rodger, Esq., M.A. The valuable services of these pioneer teachers are commemorated by three mural tablets in the High School building recording their personal characteristics and their connections with the High School.

Address to the Ottawa Valley Graduates' Society

By SIR ARTHUR W. CURRIE, G.C.M.G., K.C.B.

March 1st, 1933

Mr. Chairman and Gentlemen:

Let me assure you that I realize and appreciate the honour that is mine in being permitted to join you in this function tonight.

It is often one's pleasure to dine with different groups of men, and occasionally to speak to them. But this gathering is unique. Membership in this gathering cannot be purchased; it is not decided by ballot; you cannot apply for membership and be elected; admittance here does not depend on your social rating, on the wealth you possess, on your political bias, or on your religious faith. No, these are not the things that determine your eligibility for inclusion here. There is another test, and that test is absolute. You must be a McGill graduate. That's the test; that's the tie that binds, and those only who know McGill and what she has been, what she is now, what she stands for, what her history and tradition have been, can appreciate the strength of that tie and the pride that goes with that badge of unity.

This organization is known as the Ottawa Valley Graduates' Society of McGill University, one of the oldest, best known, and most loyal Graduates' Societies of the University. We have here represented tonight men of many classes in our University, some of them many years apart. Many of you have travelled a long road and have passed through varied and trying experiences since the old days at McGill. At this gathering tonight you roll back the years and live again in memory, if only for an hour, with the friends of your youth, the events of unforgotten years, and in so doing you pledge anew your loyalty to the University and your support to the students of the present and of the future, and to your Alma Mater in all its undertakings.

McGill University holds a proud and honoured place in the educational history of Canada. In all parts of our country and in countries abroad it is spoken of in terms of the highest respect. Its reputation has gone out in splendour to the far ends of the earth. Its very name has been and is a symbol of honour and service. It has stamped its graduates with the badge of courage, of fair play, and of honest straight thinking. Perhaps its greatest asset is its fine tradition. It was founded in the adventurous days of more than one hundred years ago, when men lived closer to nature and when the worth of education was perhaps better realized than it is today. It was founded and nurtured in an atmosphere of hard work and simple living. It has endeavoured to retain its finest spirit of courage and justice and service. It has ever kept before it the vision of a great united country, and it has yearly sent out its graduates filled with this spirit and endowed with this vision.

As you look back tonight through the mists of the years and recall what you received from McGill University, I am sure that you will all agree that you received a certain attitude towards life. Many of the facts and much of the knowledge have faded, but the attitude of mind remains. You will recall tonight great and kindly personalities who guided your thinking at the University. They were deeply learned, and their company was a privilege. They were wise and human and understanding, earnest in their search for what is best in life and in their application of truth, and tonight you honour their memory.

Canadian universities have had for more than a century an honourable career, and have been important factors in the development of our people. The career of none of them has been more honourable than that of our own University. McGill University is more important to Canada today than it has ever been in the past, however glorious its past has been. Today, as never before, the world is calling to educated men for help in its time of trouble. We do not need to be told what that trouble is. It is known to us all, in a greater or lesser degree. These are trying days, when the hearts of men falter, as never before. Canada needs the power and energy of the trained minds of her educated manhood. Our ancestors appreciated the fact that education was the bed-rock of all advancement. Education is

still the bed-rock of all advancement. But we must see to it that our institution remains true to the purposes for which it was founded.

We must not forget for a moment the true function of our University. It is today, what it always was, to pass on the full heritage of a civilization. I think that sometimes in our present mood of fear and doubt and disillusionment we underestimate the solidity and permanence of that heritage. Change and the threat of change strike the attention most vividly. We exaggerate its extent and its importance and fail to realize how much of indestructible human achievement there is to pass on. Language and literature; science and mathematics; history and the rationale of democratic life; painting and music and architecture; the hard won moral ideas of civilization; the main forms of economic co-operation; the central needs of religion;—these all grow and change indeed. But the more they change, the more they remain, in essence, the same things. It would be folly, indeed, if we allowed the darkened atmosphere of the present long-continuing storm to fix in us the impression that the whole human atmosphere was transformed. Or, to change the metaphor, the ship will emerge from the storm, battered and severely tested, it is true, but it will be the same ship to take on the next consignment of passengers.

Nevertheless, there is a special duty of education in a time like this. It concerns the refilling and the reorganization of the ship that we shall have to effect, in the light of what the storms may teach us about the art of navigation. In educational terms, there is demanded of us a more than usually drastic review and re-appraisal of the whole body of ideas upon which our civilization rests. What of war and disarmament, of international understanding, of unemployment and a guarantee of economic security; of leisure and children, and the reconstruction of city and city life; of rural life and all its problems; of a revitalized religion;—of the whole art of living? How are we going to guarantee that as a result of the storms there shall be both new and better insights into the art of navigation and a certainty that these insights will become effective? That question must indeed be asked. There is no use in avoiding the issue. That way lies chaos and hopelessness. We must put it honestly and squarely to ourselves. If we refuse to do so, if we just stand pat and say, "There is nothing to be learnt," the retort may well be mutiny and the seizure of the ship. Then the untrained but exasperated navigators may take her on the rocks.

What are we, then, to do with the on-coming crew, the youth of today? The answer seems to me clear in at least one respect. Put them through a thorough discipline in the free handling of ideas. Ideas govern the world. There is no tariff against them. They cannot be boycotted. I spoke in the same sentence, you will notice, of "discipline" and "freedom." But there is no conflict here if we intelligently understand these terms. Undisciplined troops can never be trusted, neither can undisciplined thinking. Conviction must come only after long testing, after criticism and analysis by the free, disinterested mind under wise guidance. As long as you believe in democracy, you must realize it can be saved in no other way. A free acceptance of free tested ideas is its very life.

If this be true—and I believe it is true—the importance of education in Canada and of Canadian education in the world is greater today than it has ever been before. For surely, today as never before, we are face to face with new and difficult circumstances. We are in a world of vast unrest, a world where the cross-currents of the minds of men stir whirlpools of unguided force that threaten to engulf and destroy rather than to create. In our world, true liberty is in danger of being crucified on the cross of false desire or false appeal, and true peace is in danger of being slain on the altar of international or inter-class jealousy and envy and hate and distrust. All around us we hear the murmurs of a troubled time. There are special appeals to the judgment and poise and tolerance of the Canadian people. Agricultural difficulties, agitations of miners, angry demonstrations by or on behalf of the unemployed, wild and whirling words uttered or written by those who call themselves Communists—these and other occurrences are putting our country, like the rest of the world, on trial. And men are asking, Will our country emerge with the intelligent understanding of the grievances and demands of sections of our population? and, at the same time, they retain their faith in the steadfastness of the mass of our citizens, and in the fitness of our political institutions to meet each great need as it arises. They will ask, too, another question, when signs of an upturn in industry and commerce appear. Whether our country can keep its head under clearing financial skies, and observe those rules of prudence and caution which were so recklessly flung to the winds three or four years ago?

One of the functions of education is to equip individuals to see the moral defects of existing social and economic arrangements and to take an active concern in bettering conditions. We are all involved in existing defects, swept away as we were by the prevalent mania for rapid

material gains. Our hope today is in clearer vision and firmer courage and a steadier morale on the part of those who will soon be coming to take their part in righting and mending the shattered economic machine. Our discontents today flow from human conduct. Hence they are under human control. We cannot hope for recovery from our present prostrated condition without thought—thought reorganized and readjusted to meet a changed world—and without ideas that, in Plato's words, "are not unfruitful, but contain seed within themselves, from whence others springing up in other minds are able to make this seed immortal."

For cultivating such thought, the chief responsibility must rest on our universities. They are the most honest of the institutions of modern society. Were they to yield to dishonest thinking, our last prop of society would crumble. The University seeks truth with intensity of purpose and desire and unselfishness. The scholar's passion for truth, showing itself in laboratory or library, in search with lens or spectrum, in enquiry into man's place in the scheme of things, in the dreams and intuitions of the poet and the seer,—all this passes into the very blood-stream of the nation. Increasingly must we in the universities take thought of human relationships. An individualism that concerns itself with the individual alone, whether of person or nation, is doomed. *And a Utopian society that ignores individual ambition, initiative, ability, and opinion, is likewise doomed.* The universities must be centres of preparation for an individualism which has at heart a social concern for the good of the many. If we are to emerge from conditions which are so perilously near chaos, it is obvious that we must teach men to *think straight.* By ending crooked thinking we shall emerge from a witless wandering in the wilderness into the promised land of light and life and love. Today there is upon us all the compulsion to be thorough and to be patient. We must clear our world of its stones and weeds and refresh the intellectual and moral ground of our civilization. Today events are searching out the true stuff of our national character. Education must teach about our traditions and about those methods and principles which have guided our country's progress. If these are right and true, reverence for them will follow. But at the same time education must teach men and women to grow with a constantly changing world, and to make adjustments in accordance with new needs and new problems. It is possible that our educational systems, however excellent they may have been, have not adequately equipped people to see or realize what they were doing in national and international affairs. It is apparent that wisdom has failed, at least has not been adequate, and that education has some responsibility for the failure. We have too often, perhaps, pushed forward the frontiers of knowledge and scholarship, with too little attention to the *relation of that frontier to human affairs;* we have been emphasizing the necessity for research, without considering whether that research ever penetrated the field of action.

Never was the responsibility of education and of educated men and women so great as at the present time; never was the obligation and the opportunity of colleges and universities so great as in the present period of storm and stress in our tortured and sorely perplexed world. Our world is looking anxiously for light and for truth. Where are these to be found if not in our centres of learning?

Today as never before a definite obligation is imposed on trained minds—on the best brains of our country—to contribute their knowledge and their wisdom to the problems of the hour. Governments should have their aid and their advice. It is no small difficulty with which we are faced. These are grave and grievous days, and it would be unwise to speak lightly of their seriousness. The tough problems before the country can be solved only by tough minds. There can be no shortcuts to national well-being and contentment. We cannot emerge from our troubles by any haphazard steps. These hard times demand hard labour and hard thinking, and if we do not get these, the times will become harder. No mass of repeated statements that all is well can change the distressing facts. The most capable brains we have, and the most intense energy, are none too capable or intense for the immense labours necessary to lift our country out of its present condition. All our scattered forces must be combined to lead us out of the morass of doubt and even of despair.

It is extremely doubtful, in my judgment, if our desired objective can be reached by a politically divided country. Unity of all, for the good of all, would seem to be our surest and safest guiding force. Sixteen years ago we had to meet a national emergency. We met with it unity. In that troubled time, all party prejudices and badges and slogans were forgotten or submerged, and as a people we moved forward in one solid front to victory. Not otherwise could we have found success. Today we are in a situation more perplexing and more serious than that of 1917. The emergency is equally great, or even greater. Again we need a united effort and the submerging of all differences. Again we need to move for-

ward to prosperity, security and stability with one front, where prejudices and badges and slogans are forgotten. There is stagnant industry; tottering business; hunger; distress; despair—all urgently demanding redress. And redress can only come from unity of action, which can be made possible, or at least hastened, I believe, by a national government, representative of all the forces and all the thought of the country.

The establishment of such a power would mean sacrifice, a spirit of give and take, a measure of temporary compromise. But in the end it would succeed. In the past one of our political weaknesses has been the fact that we are all interested in voting for or against *someone*, rather than for or against *something*. We have been so strongly grounded in an inherited idea that no doubt could drag us away from our traditional position. Too often we have believed—or at least acted as if we believed—that our thoughtfulness or our intelligence must be measured by our tenacity to our party's principles rather than by what our reason dictated. We have too often based our estimate of public policies on the pages of a single partizan newspaper, rather than on our own examination of all sides of a question, with the result that our opinions so formed have been solidified into prejudice. Such an attitude can never lead us out of a crisis or an emergency, which can only be overcome and passed by the operation of united and harmonious strength.

The time is calling for such strength, as it never called before, even in war days. And in the call there is no criticism of any party or group or policy. National distress and national salvation know no party and no diversity. They know only a common objective—the objective of rehabilitation and the salvaging of an almost wrecked world—and surely the best means of reaching that objective can be agreed upon, even by men of ordinarily different views. That seems to me to be the first necessity in our present difficulties. With that accomplished, a more complete solution of our problems will follow. Let us seek first national harmony, and other things will be added unto us.

On the means of emerging from our perplexing difficulties there are, naturally, many diverse opinions. Many cures are suggested for the disease, by individuals and groups of individuals. Of these, many are experimental, and, to say the least problematical, in their results. Into these by-paths to the promised, and perhaps the visionary land of better conditions I have no desire to enter tonight. It would take a long time to explore them all, and some of them end in "nowhere."

Irrespective of what our opinion may be on these vital questions, one thing is sure: as the springtime dawns we are all looking toward the future. We are no longer, as we were when we rolled five years ago in an empty prosperity, living in the present. We are concentrating in hopes or fears as to what the future has in store. There is no fear of famine, no dread of a lack of commodities,—but a dread of the proper distribution of these commodities to the suffering and the needy in exchange for their efforts, the efforts which we call "work." Such fears and dreads move in cycles. They have existed often before in our history. In forecasting the future we must consider the past. It is here that the University, and the University product, are of utmost national value. There is a danger that if the depression continues, all sorts of quack remedies, because of ignorance, may be prepared and accepted for its cure. Such doubtful remedies have been characteristic of all periods of depression. We have emerged from one fool's paradise; we must not, in our groping, wander into another, following a will-o'-the-wisp guide. We must bring to bear, through education, all the resources of history and of a well-tested civilization in the form of ordered information and guidance and discipline, which will equip our people with that fair, impartial, detached, and unprejudiced judgment so necessary in the present hour. Our future will depend on how far we understand our past and profit by its error. That is a task for education, and for men and women of education and trained mentality. And no task could be more alluring.

DR. MARTIN VISITS NEW YORK GRADUATES

As we go to press, information reaches us that the New York Graduates' Society will hold their annual dinner in the Fraternity Clubs Building on March 20th, and that Dr. C. F. Martin, Dean of the Faculty of Medicine will be their guest of honor and will give the principal address of the evening.

NEW McGILL MARCH AND SONG

Handsome mantel clocks, bearing suitable inscription plates have been awarded as a result of the competition for original musical compositions, which has been held under the combined authority of the Graduates' Society and the Students' Council. Mr. W. Bruce Ross, B.Sc. (Arts) '30, M.Sc. '31, won the prize for the McGill March. His composition is entitled "A McGill Marching Song." Mr. R. G. Freeman, Med. '36, won the prize for the McGill Students' Song.

The judges were Dean Douglas Clarke, Mr. Harry Norris and Mr. Robert Shaw, and the competition was carried out by a committee consisting of Mr. G. B. Glassco and Mr. Robert F. Shaw.

A McGill Conspectus

December, 1932—February, 1933

(WHEREIN *The McGill News* PRESENTS IN CONDENSED FORM SOME DETAILS OF THE UNIVERSITY'S RECENT ACTIVITIES AND ACCOMPLISHMENTS.)

ATHLETIC PICTURES WANTED

A plan to perpetuate the athletic history of McGill through collecting, for eventual display in the proposed new gymnasium on Pine Avenue, athletic pictures of former years has been launched at the University and is being vigorously pursued. All graduates and others with pictures of this nature in their possession are invited to donate the pictures to the collection, or to leave them to McGill by a clause in their wills. Notation on the pictures of exactly what they represent is requested, with special attention to the identification of the players shown. Photographs for the proposed collection will be welcomed if sent to Major D. Stuart Forbes, Athletic Manager, McGill University; or to the Executive Secretary of the Graduates' Society.

McGILL'S ATHLETIC TROPHIES

An interesting article dealing with McGill's athletic trophies and the plan to lodge them in the gymnasium that will eventually be built on Pine Avenue appeared in the Montreal *Gazette* on January 17. D. A. L. MacDonald, who wrote the article, notes that football cups and pictures date back to 1874, hockey trophies to 1881, and basketball souvenirs to the game's earliest stages. Inter-faculty hockey dates from 1897, and the McGill University Athletic Association from 1884. The individual track and field title, first awarded in 1894, was won four times in succession (1904-1907) by Robert A. Donahue, Medicine; four times (1928-1930 and 1932) by C. R. Drew, Medicine; and three times each by Percival Molson (1898-1900), Arts; J. D. Morrow (1901-1903), Theology; and W. R. Kennedy (1919 and 1922-'23), Medicine.

McCORD EXHIBITS CONTINUE

Success is attending the series of historical exhibits arranged this winter by the McCord Museum and designed for the special benefit of students in the 5th and 6th grades of the Montreal and district schools. Five such exhibits will have been completed when this issue of *The News* appears. Subsequent exhibits will include: March 20-April 15—War of 1812, North-West Rebellion, Northern Exploration (1800-'70); April 20-May 31—Second Riel Rebellion, Railway and Industrial Development, Canada in the Great War, (1870-1920).

CARNEGIE MUSEUM COMMITTEE

The appointment of Lionel E. Judah, Secretary of the McGill University Museums Committee, to a committee formed to advise the Carnegie Corporation of New York in regard to significant opportunities for co-operation in the Canadian museum field was announced in January. Formation of the Advisory Committee resulted from the survey of Canadian museums made on behalf of the Corporation by Sir Henry Miers and S. F. Markham, and is an evidence that the Corporation's interest in Canadian museums is being maintained. Eric Brown and H. C. McCurdy, Ottawa; Dr. J. C. Webster, Shediac, N.B.; and F. Kermode, Victoria, B.C., are also members of the Committee.

INFANTILE PARALYSIS RESEARCH

To the Society of American Bacteriologists in convention at Ann Arbor, Michigan, in December, Dr. Maurice Brodie reported progress at McGill in experimentation with monkeys with a view to promoting in humans immunity from infantile paralysis. Inoculation of the monkeys with the virus of the disease and with a counter-balancing serum has produced interesting results. The methods employed have not yet reached a stage where they can with safety be applied for the protection of human beings, but the outlook for such application, and consequent immunization, is not without hopeful prospects.

NATIONAL RESEARCH STATISTICS

A report of the National Research Council of Canada issued in December and covering the 15-year period to March 31, 1932, shows that, through the support of the Dominion Government, 588 bursaries, studentships, and fellowships to Canadian post-graduate students had been awarded. Forty per cent. of the 350 students so subsidized have attended McGill, where 86 have been awarded Ph. D. degrees and 82 the degree of M.Sc. Of these 19 had received their B.A. degree at McGill and 36 the degree of B.Sc. The remainder were graduates of other universities who chose McGill for their final university training.

GOLD CHANGE SUGGESTED

Before the Women's Canadian Club of Montreal in January and at the University of Cincinnati in February, Dr. Stephen Leacock outlined methods which he believed would overcome the prevailing depression. It is impossible in a short paragraph adequately to summarize the views he expressed, but the feature that attracted most general press comment was his proposal that one dollar be composed of 17 grains of gold instead of the present 23 grains. The existing coined dollar would then be worth $1.33 and the number of dollars issuable against a given fund of gold would be increased by one-third. Though the resulting rise in prices would not permanently solve all economic problems, it would give the world a few years in which to study and apply to industry the ameliorating principles without which the modern scheme of things was headed for final disaster.

DR. LEACOCK QUOTED

Press comment on Dr. Leacock's address at the University of Cincinnati, mentioned above, emphasized his views in regard to existing economic systems. "The profits system," he said "is as old as Adam and Eve and as respectable. It is the only system that has ever worked. The principle that my house is mine, my

labour and my thought my own—the principle of the economic independence of the individual is the only true basis of society. Socialism," he added, "is a bright soap bubble and Communism a cup of blood." Strongly the speaker insisted that Socialism "jabbering on its soapbox" offered no real solution to practical world problems. It talked, he believed, only of impossible people living in an impossible world.

EVENING LIBRARY COURSES

Two evening library courses, presented by the McGill University Library School, were announced in January. The first, it was stated, would consist of 14 lectures by Dr. G. R. Lomer, the University Librarian, on library organization and routine, beginning on January 31 and continuing with two lectures each week thereafter. The second course, on reference work and subject bibliography, will be given by Miss Marion V. Higgins. It will consist of 14 lectures, with laboratory periods as required, and will open on Tuesday, March 31, at 7.30 p.m. Tuesday and Friday lectures will then continue until the course is completed.

EXPERIMENTAL SURGERY

In December Sir Arthur Currie announced a grant of $15,000 to the Medical Faculty by the Rockfeller Foundation, for the continuation of work in experimental surgery. To this work, which has been carried on for some years under the supervision of Dr. E. W. Archibald, Chief Surgeon of the Royal Victoria Hospital, Montreal, and head of the Department of Surgery at McGill, and that of Boris P. Babkin, M.D. (St. Petersburg), D.Sc. (London), Research Professor of Physiology, many younger surgeons have contributed. The Rockfeller Foundation had granted $85,000 to the work in the past four years, and the latest gift generously recognizes the high standard of accomplishment that has been attained.

UNEMPLOYMENT RESEARCH

Progress in the social science investigations now being conducted at McGill was reported by Professor Leonard C. Marsh in mid-December. The studies now nearing completion include: Employment and Unemployment in Rail Transport Industries (Montreal); the same in regard to Dock and Harbour labour (Montreal); Unemployment and Unemployment Relief (Western Canada); the Occupational Adjustment Problems of British Immigrants; British Immigrant Areas in Montreal (Verdun); British Immigrant Dependency Cases (Montreal). Increased knowledge and better understanding of the problems of unemployment are the objectives which all these studies seek to attain.

McGILL RESIGNS

Resignation of McGill University from the Association of American Law Schools was announced from Chicago in December and was confirmed to the press by Sir Arthur Currie, who pointed out that a new condition of membership—that of having four full-time professors on the staff—made McGill ineligible. McGill has three full-time professors in the Faculty of Law, Sir Arthur noted, and commands assistance, on a part-time basis, of several members of the Bench or Bar. Expansion of the Faculty to meet the new requirements of the American Association could not take place at present, and the University resigned accordingly.

GRADUATES' EMPLOYMENT BUREAU

In his report on the Graduates' Society Employment Bureau for the quarter year ending December 31, 1932, the Director, G. B. Glassco, notes that permanent positions were obtained for 10 men and 5 women; and temporary posts for 13 men and 3 women; a total of 31 placements. These were classified as follows: Men: Engineering 7, Science 1, Arts 1, Commerce 12, Non-McGill 2. Women: Arts 5, Commerce 1, Non-McGill 2. The total of 31 placements compared with 18 in the same period in 1931. The Director reports the establishment of a small training school for women graduates who are seeking office employment; and records with appreciation the continued co-operation in his work of many members of the University staff.

DR. CRILE'S LECTURE

Introduced by Dr. E. W. Archibald, Professor of Surgery and Chief Surgeon of the Royal Victoria Hospital, Dr. G. W. Crile, noted surgeon of Cleveland, addressed the Alpha Omega Alpha Society in the Biological Building in December. Investigation, Dr. Crile stated, has shown that certain diseases, such as hyperthyroidism, neurovascularaesthenia, and peptic ulcer, were not due to climate, infection, or excessive physical work. Their cause lay, he said, in human relationships and their explanation in our racial history. A cure for these diseases, Dr. Crile stated, had been sought through denervation—the cutting off of the sympathetic nervous system by severing the nerves running out from it—and a notable measure of success had resulted.

SOMERVILLE LECTURE

Moyse Hall was filled on December 9 when the annual Somerville Lecture was delivered by Dr. Richard Goldschmidt, Director of the Kaiser Wilhelm Institute of Biology, Berlin, Germany. Dr. Goldschmidt's subject was the physiological theory of heredity, on which he has been working for a number of years. Experiments in sex-determination were described and the audience were told that in this most complex subject fascinating steps into the unknown had been taken. Dean A. S. Eve, who presided, explained that the annual Somerville Lecture was made possible through a bequest for the purpose by James Somerville (1775-1837), a prominent citizen of Montreal in that period.

THE GRADUATE'S OBLIGATION

In an analysis of student costs at McGill, read at the Graduates' smoker in February, George C. McDonald, a Governor of the University, presented some striking figures. In the past five years, the average cost to the University of each student has been somewhat over $500 a year. This cost has been borne 30% by the student through fees, 45% by the University through endowment funds and other revenue, and 25% by the University through appropriations from general funds. In other words the student at the present time is paying only one-third of the cost of his education. A student who has passed four years at the University at a cost, to the University of $2,080, has benefited by the expenditure on him, from other than his own resources, of about $1,400. The Graduates' Endowment Fund, Mr. McDonald suggested, provided a means through which a measure of the graduate's very substantial indebtedness to the University could be repaid.

PROFESSOR LLOYD HONOURED

Professor F. E. Lloyd, Macdonald Professor of Botany and President of the Royal Society of Canada, will receive from the University of Wales next July the degree of D.Sc., *honoris causa*. An article by Professor Lloyd on his work in the successful production of scientific movies appears in this issue of *The News*.

McGILL UNIVERSITY TO PRESIDE

McGill University has been elected President of the Association of American Universities for 1932-'33. It is the custom of this Association, which includes 49 of the leading universities in the United States, and McGill and the University of Toronto in Canada, to refer to its officers by the names of the Universities they represent, and the appointment of McGill to the presidency means that McGill's senior delegate will preside at the conference to be held at Princeton next October. This will be the first time that a Canadian university has held this honour.

STAFF NUMBERS 573

Not including administrative officers, such as the Principal, Bursar, Registrar, and Director of Extra-Mural Relations, the teaching staff of the University numbered 573 in mid-December. This total included 9 Deans, 82 Professors, 16 Clinical Professors, 57 Assistant Professors, 26 Associate Professors, 2 Research Professors, 129 Lecturers, 102 Demonstrators, 44 Instructors, 30 Assistant Demonstrators, 21 Assistants, 6 Graduate Assistants, 12 Clinical Demonstrators, 17 Fellows, and 1 Assistant Instructor. The total of 573 is reached by the inclusion of the Warden of the Royal Victoria College, the University Medical Officers, the Directors of Physical Education, the Athletic Manager, the Honorary Medical Librarian, and a number of others.

CARNEGIE GRANT FOR BOOKS

In January, Sir Arthur Currie announced that the Carnegie Corporation had made a grant of $15,000 to McGill for the purchase of books for the University Library. The sum will be paid in three annual installments of $5,000 each, and has been granted with the purpose of adding to the stock of "undergraduate reading" material. It will not, therefore, be available for the purchase of research material, special collections and subscription sets, nor for the completion of files of periodicals and text-books; but will be devoted in entirety to the purpose for which it was made.

LORD ZETLAND'S ADDRESS

Under the auspices of the National Council of Education, the Marquess of Zetland lectured on "Students in India" in Moyse Hall on January 28. Lord Zetland noted that in a country where there were 220 official languages, the student must learn English, as instruction in the multitudinous tongues of the country was impossible. He spoke with strong feeling of Gandhi's behaviour at the Round Table Conference in London, and stated that, in his opinion, Lord Willingdon's action in placing Gandhi under arrest was wise and justified in every way. Sir Arthur Currie presided and thanked the speaker and the National Council of Education for a most interesting address.

ZOOLOGY APPOINTEE ARRIVES

Professor Harold B. Fantham, M.A., D.Sc., formerly Professor of Zoology and Comparative Anatomy in the University of Witwatersrand, Johannesburg, South Africa, reached Montreal in January and assumed duties as Strathcona Professor of Zoology at McGill. He is a graduate of Cambridge University (Christ's College) and of London University, being a Fellow of University College, London. Professor Fantham is a past president of the South African Association for the Advancement of Science, a Fellow and past vice-president of the Royal Society of South Africa, and past president of the South African Biological Society. He is also a Fellow of the Zoological Society of London, the Cambridge Philosophical Society, the Royal Society of Medicine, and the Eugenics Society, and is the author of more than 100 published scientific papers.

MRS. FANTHAM A SCIENTIST

Mrs. H. B. Fantham, who accompanied her husband when he arrived in Montreal from South Africa to assume the chair of Zoology at McGill, holds the degree of D.Sc. from London University, and in 1927 was awarded the South African Medal, an honour conferred annually by the South African Society for the Advancement of Science in recognition of outstanding research. Mrs. Fantham, who signs her scientific work with her maiden name, Annie Porter, was Senior Lecturer in Parasitology at Witwatersrand University and head of the Department of Parasitology at the South African Institute for Medical Research. Her work has included research in animal parasitology, protozoa, flukes, and hookworm, subjects commanding diligent attention at the present time in the Institute of Parasitology at Macdonald College.

PARASITOLOGY PROGRESS

At a meeting of the Associate Committee on Parasitology of the National Research Council and McGill University, held at Macdonald College on January 17, Dr. H. M. Tory, Chairman of the Council, Sir Arthur Currie, Dr. H. Barton, Dominion Deputy Minister of Agriculture, and a number of others, heard a satisfactory report by Dr. T. W. M. Cameron, Director of the McGill University Institute of Parasitology. The Institute has continued its survey of parasites of domestic animals and has already made a collection unequalled elsewhere in the Empire. A recent study has revealed a microscopic fluke as the cause of death of large numbers of ducks in Nova Scotia. The Institute has rapidly taken on Imperial significance, Dr. Cameron reported, and is co-operating with the Agricultural Departments of Central and West Africa, the West Indies, Hongkong, New Zealand, and other parts of the Empire.

PARASITOLOGY APPOINTMENTS

The appointments of Dr. W. E. Swales and Dr. Ivan Parnell to the staff of the McGill University Institute of Parasitology at Macdonald College were announced by Professor T. W. M. Cameron, head of the Institute, late in December. Dr. Swales, a veterinary surgeon and graduate of the Ontario Agricultural College, was formerly on the staff of the Animal Diseases Branch of the Department of Agriculture, at Hull, P.Q. Dr. Parnell is a graduate in Agriculture from Cambridge and holds the degree of Ph.D. from Edinburgh.

THE EXPANDING UNIVERSE

On the afternoon of February 2 the Physical Society of McGill University was addressed by Abbé George Lemaitre, noted Belgian physicist, who explained his theory of "An Expanding Universe." So many people wished to hear this address that it was necessary to transfer the lecture from Moyse Hall to the assembly hall of the Montreal High School. Abbé Lemaitre paid a gracious tribute to the work in explaining the theory of the universe accomplished at McGill by Lord Rutherford, and proceeded to discuss his own fascinating theory, based on the existence of cosmic rays, of a finite, unbounded, and expanding universe. Dr. David Keys, President of the Society, introduced Abbé Lemaitre and Dr. A. S. Eve, Dean of the Faculty of Graduate Studies and Research, thanked him.

EXTENSION WORK IN GEOLOGY

Under the auspices of the Department of Extra-Mural Relations, Dr. T. H. Clarke is delivering a series of lectures on historical geology in the Redpath Museum on Tuesdays, at 8 o'clock p.m. The series, which opened on January 17, will include among the subjects discussed: Theories of Earth Origin; Geological Time; Pre-Cambrian Time, Duration, Rocks, and Ore; The Origin and Evolution of Vertebrate Groups; and The Geology of the Vicinity of Montreal.

GEST LIBRARY VISITED

Among the visitors to the Gest Chinese Research Library in December were Dr. On Shionoya, Professor of Chinese Classics at the Imperial University of Tokyo, Japan; S. Iwamura, First Secretary of the Japanese Legation, Tokyo; and S. Abe, Principal of a number of high schools in Tokyo. These visitors were received in the Library by G. M. Gest, Esq., by Dr. Kiang Kang-hu, Professor of Chinese Studies, and by Dr. Nancy Lee Swan, Curator of the Library. They explained that their visit had been prompted by His Royal Highness Prince Takamatsu, of Japan, who visited the Library in 1931 and who advised them on no account to miss seeing the treasures the Library housed in the course of their study of educational facilities in North America.

CHINESE NEW YEAR

In accordance with a custom recently established, Chinese citizens of Montreal and others gathered in the Gest Chinese Research Library, McGill University, on the afternoon of January 26, to celebrate the Chinese New Year. Although January 1, is the officially recognized New Year's Day of the Chinese Republic, the traditional Chinese New Year, January 26, has been observed for about 5,000 years and has retained a large measure of personal and cultural appeal. Its commemoration is accordingly still marked with ceremony in many places throughout the world.

MEMORIAL SERVICE

The annual service at which McGill University honours the memory of her dead was held on December 4, 1932, in Divinity Hall, University Street. The service was conducted by the Reverend Dr. James Smyth, Principal of the United Theological College, assisted by the Reverend F. Scott Mackenzie, Principal of the Presbyterian Theological College, and Sir Arthur Currie delivered the address. Those whom the University mourned were: Mr. Justice John Sprott Archibald, Governor; Alexander Dougall Blackader, Emeritus Professor of Pharmacology, Therapeutics, and Paediatrics; Isaac Gammell, Governors' Fellow on Corporation; Charles Ernest Neill, Governor; William Templeton Waugh, Kingsford Professor of History and Chairman of the History Department; and Edward D. Shaw, Malcolm E. McNaughton, and John Rutherford Smith, Undergraduates.

ARMISTICE SPEECH QUOTED

The *Canada Gazette*, of London, England, referred warmly on December 3 to the speech which Sir Arthur Currie, in a McGill Graduates' Society broadcast, delivered over Radio Station CKAC on Armistice Day, November 11. The first part of Sir Arthur's speech, the *Gazette* remarks, "was a moving tribute to the youth of the University who laid down their lives in France and Flanders." Continuing, Sir Arthur noted that "hate and injustice were still enthroned" and pleaded that peace among the nations of the world might succeed the present unsatisfactory relationships, which were "only an Armistice."

McGILL Y.M.C.A. ANNIVERSARY

Marking the fiftieth anniversary of the Student Christian Association in McGill University, a dinner was held under the chairmanship of Dr. Frank D. Adams, in the Ritz Carlton Hotel, Montreal, on Saturday, December 10; and on the following morning a University service was held in Divinity Hall. At the dinner Sir Robert Falconer, Emeritus President of the University of Toronto, spoke on "The Place of Religion in the University;" and at the religious service, conducted by the Right Reverend the Bishop of Montreal, Sir Robert spoke again, basing his sermon on the parable of the rich man who could not give up all to follow the Master. Sir Arthur Currie, who was to have taken part in the ceremonies on both occasions, was unable to be present, owing to an attack of influenza.

LECTURE ON RADIANT HEAT

Radiant Heat was the subject of an address to the Montreal Centre of the Royal Astronomical Society of Canada by Dr. A. Norman Shaw, F.R.S.C., in the Macdonald Physics Laboratory in December. The main properties of thermal radiation were discussed; and the effects of reflection, refraction, polarization, interference, and velocity were interestingly demonstrated. The Macdonald Physics Laboratory was formally opened on February 23, 1893, and Dr. Shaw has kindly contributed to this issue of *The News*, from material still available, an account of the ceremonies on that occasion.

LIBRARY FOR UNEMPLOYED

A library for the benefit of "white-collared" unemployed was opened in Strathcona Hall early in the winter, some 500 volumes being provided by bookstores, existing libraries, and private invididuals. Two honorary librarians were placed in control and the books, it was announced, would be loaned without charge to those who were attending the series of lectures for the unemployed. This series has been one of McGill's contributions towards the amelioration of the plight of educated men in the throes of enforced idleness.

Graduates' Society Broadcasts

SINCE the last issue of *The McGill News*, the Graduates' Society radio broadcasts have continued and programmes, under the direction of G. McL. Pitts, President of the Montreal Branch, have gone on the air over Station CKAC each Monday night from 10 to 10.15 o'clock and each Friday night from 10.30 to 10.45. These programmes will continue until the end of March. Among those whom the Society has had the honour to present since the last list appeared in these columns are:

December 23—Sir Arthur Currie and Mr. Wesley Frost, United States Consul-General (from the Harvard-McGill hockey match in Montreal); Dec. 26—The Rev. G. Abbott-Smith, Principal of the Montreal Diocesan Theological College; Dec. 30—Dr. A. V. Douglas, on Astronomical Reflections; Jan. 6—Dr. Kiang Kang-hu, on Chinese Studies; Jan. 9—Dean Sinclair Laird, on Teacher Training at Macdonald College; Jan. 13—Mrs. Warren, on the McCord Museum; Jan. 16—Dean Ira MacKay, on The Vocation of a Scholar; Jan. 20—Mrs. Walter Vaughan, on The Women's College of McGill; Jan. 23—G. B. Glassco, on The Graduates' Society Employment Bureau; Jan. 27—Dean Ernest Brown, on The Engineer and the Community; Feb. 3—T. H. Matthews, on Running the University; Feb. 6—Prof. P. J. Turner, on The Architect and the Community; Feb. 10—Dr. T. H. Clark, on The Redpath Museum; Feb. 13—Prof. R. de L. French, on Engineering Education in Retrospect and Prospect; Feb. 17—E. L. Judah, on The Ethnological Museum; Feb. 20—Walter Molson, on Athletics in Relation to Education; Feb. 24—Prof. R. R. Thompson, on University Education for Commerce; Feb. 27—Prof. F. Clarke, on The Work of the Department of Education at McGill University; March 3—Dr. A. L. Walsh, on The Relation of a Graduate in Dentistry to the Community; March 6—Prof. W. G. McBride, on Canada's Gold Production and its Effects on the Depression; March 10—Dr. Wilder G. Penfield, on what a Rhodes Scholarship at Oxford offers the Canadian Student.

These broadcast addresses will be continued until March 31st and may be resumed at the beginning of the autumn term in October.

The Society, through the Director of the Broadcasts, expressed in *The McGill Daily* on February 2 warm appreciation of the co-operation that so many members of the University staff had extended in making the radio programme a marked success. *The McGill News* welcomes the opportunity to repeat this message and to convey the Society's thanks to those who have maintained the high standard to which Mr. Pitts referred.

THE ALUMNAE SOCIETY

Recent meetings of the Alumnae Society, under the chairmanship of Mrs. G. St. G. Sproule, provided interesting occasions for the women graduates and their friends to gather together.

On November 30th, after tea refreshments, Miss C. I. Mackenzie spoke on "A School Principal's Work;" Miss Ruth Shaw spoke on "The Junior Red Cross," and Dr. Mary Childs gave an address on "Medical Work for Children."

On December 16th, following tea refreshments, Dean Douglas Clarke of the Faculty of Music, gave an illustrated address, his remarks being accompanied by musical selections.

On January 25th, Dr. Kiang Kang-Hu addressed a meeting of the members, following tea refreshments, on "Modern Chinese Literature."

On February 8th, following the usual refreshments, Dr. René du Roure spoke to the members of the Society on "The French War Debt."

On February 15th, the Society held an entertainment in aid of the Canadian Federation of University Women's Scholarship Fund, consisting of a lecture on "Folk Song of Old French Canada," by J. M. Gibbon, Esq., a special rendering of Old Folk Songs, by "The Music Makers," directed by Mr. H. Eustache Key, and a Talking Picture of the Festival at Quebec, by courtesy of the Canadian Pacific Railway.

On March 9th, the Society held its regular monthly meeting in the Museum of the McGill Medical Building. After tea, Dr. Maude Abbott's Medical Exhibit was on view, and a visit was paid to the Osler Library. Both Dr. Abbott and Dr. W. W. Francis gave addresses.

These meetings of the Alumnae Society have been enjoyed by the members and have been instrumental in holding the membership of the Society up to a high mark for the season.

Lost Addresses

Graduates of Science and Science in Arts

Any information in regard to the Graduates listed below will be welcomed by the Graduates' Society, Executive Office, McGill University.

A

Adrian, Robert Wilson B.Sc. '10
Ahern, Philip Chas. B. B.Sc. '23
Alexander, E. Douglas B.Sc. '14
Allan, Leslie, W. B.Sc. '09
Amur, Leon B.Sc. '19
Anderson, Clayton Earle B.Sc. '19, M.Sc. '20
Angus, Roy F. B.Sc. '15
Auchinleck, Gilbert G. B.Sc. '08
Austin, Claude Vernon C. B.Sc. '99

B

Barber, Rene Raoul B.Sc. '00
Bates, Ralph O. B.Sc. '22
Beatty, David Herbert B.A.Sc. '98
Bentley, Wm. Wallace B.Sc. '08
Beverley, I. Wm. B.Sc. '18
Biggar, Percival Elliot B.Sc. '22
Bishop, Eric Gordon B.Sc. '23 M.Sc. '24, Ph.D. '27
Black, Hiram Johnson B.Sc. '07
Boire, Jules Joseph B.Sc. '13
Boswell, Maxfield B.Sc. '14
Bradley, Herbert Ellison B.Sc. '20
Bregent, Edmond B.Sc. '10
Brennan, Herbert Jos. B.Sc. '19
Brennan, Jas. H. B.Sc. '19
Bristol, Chas. Fred. B.Sc. '08
Brodie, Bernard B.Sc. (Arts) '31
Brooke, Richard Owen B. M.Sc. '25
Bishop, John Gordon B.Sc. '24
Brown, Michael John B.Sc. '12
Brown, Wm. Godfrey Banks B.Sc. '07
Bulgin, Jas. Douglas B.Sc. (Arts) '25
Burnett, Archibald B.Sc. '06
Butler, Percy B.A.Sc. '98, M.Sc. '01
Buttenshaw, Major Alfred S. B.Sc. '10
Byrne, John Herbert B.Sc. '09

C

Campbell, Chas. McKinnon B.Sc. '02
Canfield, Fred. Osborne B.Sc. '08
Carleton, Everett Augustus M.Sc. '23
Carson, C. E. B.Sc. '22
Carson, John Alton B.Sc. '13
Carter, Wm. F. B.A.Sc. '95, B.C.L. '99
Carus, Wilson Eric B.Sc. '14
Chabot, Arthur J. B.Sc. '25
Chalifoux, Lionel B.Sc. '16
Chav, Elmer Hargreaves B.Sc. '13
Chorobski, George M.Sc. '32
Clark, Alan L. B.Sc. '17
Clarke, Ernest Randolph B.Sc. '96
Cockfield, Wm. Egbert B.A. '13, B.Sc. '14, M.Sc. '14
Code, Francis Leslie B.Sc. '20
Collins, John Jas. B.A.Sc. '82
Connors, Frederick Paterick B.Sc. '14
Cooper, Albert B. B.Sc. '15
Crane, John Halliday B.Sc. '24
Cromarty, Robert Parker M.Sc. '17
Crossfield, John Townley K. B.Sc. '13

D

Dalemont, Julien E. B.Sc. '09
Darling, Gordon B.Sc. '13
Daviault, Lionel M.Sc. '28
Davis, Francis Mercer B.Sc. '08
Dawson, Victor Elliott B.Sc. '08
DeLong, Walter Anthony M.Sc. '24
Dempster, Arthur L. B.Sc. '15
Dempster, Reg. Charles B.Sc. '13
Deneau, Gaston B.Sc. '20
Derrer, Louis H. B.Sc. '17
Deyell, Harold John B.Sc. '04
Dobson, Gilbert S. B.A.Sc. '95
Donaldson, Hugh Walter B.Sc. '01
Dowell, Henry Lawrence B.Sc. '08
Dowler, V. B. M.Sc. '16
Duff, David Alex B.Sc. '23
Dunn, James Lewis B.Sc. '13
Duval, Robert H. B.Sc. (Arts) '05
Dyer, Wm. Ernest Leonard B.A.Sc. '94

E

Eakins, James Macdonald B.Sc. '09
Eaton, Eugene Courtland B.Sc. '08
Edward, Arthur Jas. B.Sc. '20
Egleson, James Ernest A. B.Sc. '03
Ellacott, Chas. Herbert B.Sc. '90
Eneas, Aubrey G. B.A.Sc. '88
Estey, Jas. Royade P. B.Sc. '08
Ewan, Herbert Marvin B.Sc. '99

F

Falcke, Joseph B.Sc. '11
Fan, Paul Chung M.Sc. '25
Farnsworth, George J. B.Sc. '24
Fellow, John Alex B.Sc. '15
Finney, Wm. Harper B.Sc. '26, M.Sc. '28
Fitzgerald, Edward B.Sc. '13
Flint, Wm. G. B.Sc. '01
Ford, Walter Stimson B.Sc. '09
Forman, Edmund G. H. B.Sc. '12
Fort, C. Atherton M.Sc. '16
Franklin, Emerson Loran B.Sc. '02
Fraser, Norman Innes B.Sc. '30
Frith, John Rowland B.Sc. '27
Fritz, Wm. Clifford B.Sc. '15
Frost, George H. B.A.Sc. '96
Fry, David M. B.Sc. '02

G

Galbraith, Malcolm T. B.Sc. '01
Galley, John Vessot B.A.Sc. '20
Garden, Thos. Heeney, B.Sc. '25
Gegg, Richard Conrad B.Sc. '23, M.Sc. '24
Geldard, W. J. M.Sc. '17
Gerez, Jose Manuel B.Sc. '20
Gibbs, Harold Egerton B.Sc. '06
Gilchrist, George H. B.Sc. '15
Godbout, Fernand M.Sc. '29
Goodwin, Cassels D. B.Sc. '21
Gough, Richard T. B.Sc. '99
Graham, Ewen John B.Sc. '14
Grice, James Hugh B.Sc. '04
Griffin, Michael Edward B.Sc. '95
Griffith, Thos. Raymond B.Sc. '23
Gunn, Robert A. B.Sc. '94

H

Hachey, Henry Benedict M.Sc. '25
Hacker, Louis Waldo B.Sc. '20
Hague, Kennington H. S. B.Sc. '14
Hamilton, Geoffrey Hubert B.Sc. '13
Hamilton, George Milne B.Sc. '00
Hamilton, P. D. P. B.Sc. '22
Hample, Carl Samuel B.Sc. '13
Harding, Ellis George M.Sc. '21
Hare, Patrick John B.Sc. '27
Hargraft, Stuart A. B.Sc. '11
Harris, Clifford N. B.Sc. '22
Harris, H. W. B.Sc. '16
Harrison, Donald Randal B.Sc. '21
Harrison, Kenneth Archibald M.Sc. '25
Harshaw, Wm. Jacob B.Sc. '19
Haughton, Harold M. S. B.Sc. '07
Hay, John Stuart B.Sc. '28
Hay, Norman Kyle B.Sc. '07
Hedrick, Ira Grant B.Sc. '98 M.Sc. '99, D.Sc. '05
Henderson, Roy Grant B.Sc. '14
Hershon, Henry A. B.A.Sc. '23
Herzberg, Otto Wilfrid M.Sc. '18
Hight, Wm. Russell B.Sc. '16
Hillary, George Michael B.Sc. '98
Hodge, Charles H. B.Sc. '08
Hodina, Frank Albert B.Sc. '26
Hogan, Fred. Joseph B.Sc. '05
Holland, Francis Chaplin B.Sc. '13
Home, Maurice S. M.Sc. '25
Hutt, Gordon M.Sc. '31

J

Jacques, A. George B.Sc. '17

K

Kingsley, Edward R. B.Sc. '11
Kirby, Halder Smith B.Sc. '25
Kramar, Samuel S. B.Sc. (Arts) '28
Kurie, Francis Devereaux B.Sc. (Arts) '27

L

Lacoe, Jeremiah B.Sc. (Arts) '23, M.D. 27
La Montagne, John M. B.Sc. '15
Lanctot, Henri Raymond B.Sc. '24
Lane, Wilfrid LeM. B.Sc. '24
Lantz, Floyd C. B.Sc. '21
Lawrence, Harold George B.Sc. '20
Layton, Shirley T. B.Sc. '09
Legris, Jos. A. B.Sc. '21
Lewis, Roland Reed B.Sc. '26
Lienbenberg, L. C. C. M.Sa. '25
Lionais, J. Edward B.Sc. '15

M

Macdonald, Daniel B.Sc. '21
Macdonald, James H. B.Sc. '10
McDonald, Louis M. B.Sc. '13
MacDougall, James J. B.Sc. '14
McDougall, Roderick Joseph B.Sc. '13
McDougall, Wm. B.Sc. '96
McFarlane, Blair Athol B.Sc. '14
McFarlane, Nathaniel C. M.Sc. '21
McIntosh, Robert Foster B.Sc. '06
Mackay, Eric James B.Sc. '02
Mackenzie, Brouzrd H. B.Sc. '20
Mackenzie, Donald Gordon B.Sc. '22
MacLeod, John Wendell B.A.Sc. '26, M.D. '30
McMaster, Francis White B.Sc. '25
McMillan, Ralph Edwin B.Sc. '26
MacDougall, Chas. Gordon B.Sc. '13
MacMillen, Henry Hind B.Sc. '05
Mc'Cully, Robert B.Sc. '16
McNaughton, Ira James B.Sc. '14
McNeill, D. L. B.Sc. '16
McRae, Duncan Ross B.A.Sc. '27, M.Sc. '28, Ph.D. '30
Macrae, John M. B.Sc. '10
McTaggart, G. D. B.Sc. '22
Maltais, Jean B. M.Sc. '28
Mathieson, Donald Milner B.Sc. '07
Maxwell, Edward Gerrard B.Sc. '24
Melhuish, Paul B.Sc. '08
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Moas, Baltazar B.Sc. '17
Montague, Thomas M. B.Sc. '09
Moore, Wm. Addison B.Sc. '99
Moran, James B. B.Sc. (Arts) '15, M.Sc. '16
Morgan, Charles Bird B.Sc. '99

Morrow, Hugh Mervin B.Sc. '08
Munro, Wm. Caldwell B.Sc. '23
Murphy, Edward Justin B.Sc. '23

N

Nehin, Frank O'Brien B.Sc. '16
Newcombe, Abard Borden B.Sc. '97
Newton, Stephen Gibbon B.Sc. '06
Norton, Thomas James B.Sc. '08

O

Ord, Sidney Arthur B.Sc. '20
Osler, Philip Featherstone B.Sc. '24

P

Painter, Richard Harold M.Sc. '29
Pare, Arthur Alphonse B.Sc. '08
Parlee, Norman Whittier B.Sc. '04
Pasternach, David Samuel M.Sc. '26, Ph.D. '28
Patterson, Frank Elliott B.Sc. '01
Peaslee, Alex Sankey Lally B.Sc. '04
Pennock, William Britton B.Sc. '15
Perry, Stanley, B.A.Sc. '28, M.Sc. '29
Pilcher, Edward E. B.Sc. '13
Planche, Clifford Carlyle B.Sc. '11
Pomerleau, Rene M.Sc. '27
Press, Abraham M.Sc. '27

R

Radford, Mrs. John Edward M.Sc. '02
Raymond, William Welsey B.Sc. '12
Redpath, William B.Sc. '05
Ree, Alexander B.Sc. '25
Reed, Gordon B.Sc. '22
Richards, Edward Lorenzo B.Sc. '08
Richardson, Laurence B.Sc. (Arts) '31
Robinson, Samuel Clifford M.Sc. '25
Ross, Cecil Gordon B.Sc. '22
Ross, Walter Garfield B.Sc. '05
Russell, John M.Sc. '18, Ph.D. '27
Rutherford, Gordon Scott B.Sc. '96
Ryan, Frederick George B.Sc. '11

S

Saul, Bernard B. M.Sc. '22
Scammell, John Kimball B.Sc. '95
Schleifstein, Montague L. B.Sc. '24
Scott, George Edward B.Sc. '08
Scott, Henry Maurice B.Sc. '01
Scott, James Henderson B.Sc. '98
Scott, Joseph Morrow M.Sc. '14
Scott, Lewis John B.Sc. '23
Scott, Robert Wm. B.Sc. '11
Scriver, Fred. Wm. B.Sc. '21
Sheps, Philip B.Sc. '29
Shijam, Johan Jacob M.Sc. '24
Shrimpton, Dudley John B.Sc. '20
Simons, John J. B.Sc. '22
Simpson, Lincoln B.Sc. '93
Sivertz, Christian M.Sc. '24
Skeets, Harold Edward M.Sc. '18
Smith, Arthur Jas. M. B.Sc. '23, M.A. '26
Smith, Donald Flannery B.Sc. '25
Smith, Edmund Howard B.Sc. '20
Smith, Richard F. B.Sc. '83
Smith, Roy H. B.Sc. '21
Spafford, Arthur L. B.Sc. '07
Spencer, Arthur Gordon B.Sc. '04, M.Sc. '06
Squires, Henry Drayton M.Sc. '24
Spafford, Arthur L. B.Sc. '07
Staples, Grenville Fas. B.Sc. '15
Stark, Robert Sam B.Sc. '10
Starke, Henry MacDermott B.Sc. '13
Stevenson, Ed. Peel B.Sc. '11
Stewart, Wm. Franklin B.Sc. '26
Stewart, Wm. Wesley M.Sc. '31
Stockwell, Aylmer W. B.Sc. '23
Strachan, Lionel Alphonse B.Sc. '28
Streadwick, Ralph B.Sc. '24
Street, Leonard Lee B.Sc. '93
Stuart, Alexander G. B.Sc. '11
Swenson, P. S. B.Sc. '16

T

Taggart, Eugene MaKay B.Sc. '29
Taylor, Clarence Wesley B.Sc. '23
Taylor, Edward Roland B.Sc. '14
Taylor, Wm. Harold B.Sc. '15
Thomas, Leonard E. T. B.Sc. '98
Thorpe, William Horseman B.Sc. '03
Toole, Francis James B.Sc. '23, M.Sc. '26, Ph.D. '29
Townsend, Chas. T. M.Sc. '26
Trudeau, Alphonse B.Sc. '17
Tucker, Bryant Burgess B.Sc. '23
Tuplin, James Preston B.Sc. '89
Turnbull, Lawrence Russell B.Sc. '17

V

Van Barneveld, Chas. Edwin B.Sc. '95, M.Sc. '16
Velasco, Ed. Marmanillo B.Sc. '25

W

Waldbauer, Louis J. M.Sc. '22
Waldron, Clifford Raymond B.Sc. '14
Walker, Melvin Lothian B.Sc. '19
Wardrop, Norval B.Sc. '77, M.Sc. '84
Watson, G. H. I. M.Sc. '27, Ph.D. '32

(*Continued on Page 61*)



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Personals

THE McGILL NEWS welcomes from graduates personal notices for these columns. Press clippings or other data should be addressed to H. R. Morgan, Esq., Recorder Printing Company, Brockville, Ontario; or to the Executive Secretary, Graduates' Society, McGill University, Montreal.

WILFRID BOVEY, Arts '03, Director of the Department of Extra-Mural Relations, represented Sir Arthur Currie at the annual fête of the students of Laval University, Quebec, on February 2.

DR. W. B. HOWELL, Med. '96, Chief Anaesthetist of the Royal Victoria Hospital, Montreal, was the guest-speaker of the Canadian Ambulance Club in January, his subject being "The History and Development of Anaesthesia."

DR. H. S. BIRKETT, Med. '86, Emeritus Professor of Otolaryngology, has been appointed Vice-President of the Section of Diseases of the Ear, Nose, and Throat of the Pan-American Medical Congress, which will meet in Dallas, Texas, on March 21, 1933.

CONRAD D. HARRINGTON, Sci. '07, Vice-President and General Manager of Anglin-Norcross Corporation, Construction Engineers, was the guest-speaker at the weekly luncheon of the Progress Club, of Montreal, in the Windsor Hotel, on January 31.

DR. BASIL C. MacLEAN, Med. '27, Superintendent of the Touro Infirmary, New Orleans, has been appointed a member of the American Hospital Association Council on Community Relations and Administrative Practice.

DR. H. CAMILLE GIGUERE, B.A., Dent. '32, has opened an office as a Surgeon-Dentist at 73 Main Street, Rouyn, P.Q.

HUGH A. LUMSDEN, Sci. '12, recently presented his tenth annual report as County Engineer and Road Superintendent of Wentworth County, Ontario.

ERROL MALCOLM McDOUGALL, K.C., Law '04, has been appointed Judge of the Superior Court of the Province of Quebec, in succession to the late Mr. Justice William Patterson, Arts '86, M.A. '89, Law '95.

A RHODES SCHOLARSHIP has been awarded to David C. P. Lloyd, who is a son of Professor F. E. Lloyd and is in Second Year Medicine at the University.

P. D. ROSS, Sci. '78, President of the Graduates' Society of McGill University and President of the Ottawa *Journal*, was the guest-speaker of the Canadian Club of Montreal on January 23, his subject being "Inside a Newspaper."

DR. CASEY A. WOOD, Med. '06, LL.D. '21, and Mrs. Wood have sailed from Pasadena, Calif., to spend some time in Ceylon and the Far East, and will proceed to Italy for the summer.

GEORGE H. A. MONTGOMERY, K.C., Law '97, has been elected vice-president of Montreal Light, Heat and Power Consolidated.

WILFRID L. G. SNETSINGER, past student, has been elected president of the City Rand of Cornwall, Ont.

E. A. RYAN, Sci. '12, has been elected chairman of the Montreal Branch of the Engineering Institute of Canada.

DR. W. S. PARSONS, Med. '17, has returned to Shanghai to resume practice in that city, after having spent eight months in Canada.

COLONEL LORNE DRUM, C.B.E., Arts '92, Med. '96, who has been district medical officer of Military District No. 11, Victoria, B.C., has been retired to pension from the Royal Canadian Army Medical Corps.

THE HON. JOSEPH DILLON, Law '07, Minister without portfolio in the Taschereau administration, has been appointed a member of the Catholic Committee of Education for the Province of Quebec, succeeding the late Dr. James J. E. Guerin, Med. '78.

LT.-COL. HERBERT MOLSON, Sci. '94, President of Molson's Brewery, Limited, has been elected a director of the Shawinigan Water and Power Co.

DR. G. K. MacNAUGHTON, Med. '06, and Mrs. MacNaughton, of Cumberland, B.C., recently celebrated their silver wedding. Dr. MacNaughton has sat in the British Columbia Legislature for the riding of Comox, since 1928.

E. P. TAYLOR, Sci. '22, of Toronto, President and General Manager of the Brewing Corporation of Canada, has joined the board of the Cosgrave Export Brewery Co.

MAJOR A. E. THOMPSON, D.S.O., M.C., Med. '13, has been promoted to the rank of Lieutenant-Colonel in the Royal Canadian Army Medical Corps.

MAJOR-GENERAL A. G. L. McNAUGHTON, C.M.G., D.S.O., Sci. '10, has been granted a four-year extension of his term as Chief of the General Staff at Ottawa.

LT.-COL. B. C. HUTCHISON, past studenr, has retired from the command of the 17th Duke of York's Royal Canadian Hussars and has been succeeded by MAJOR H. WYATT JOHNSTON, Sci. '21.

REV. DR. ROBERT H. PARKES, past student, Rector of Yantic, Conn., has been appointed Rector of the Anglican Parish of Valleyfield, Que.

WILLIAM A. MATHER, Sci. '08, has been appointed General Superintendent of the Canadian Pacific Railway at Calgary, Alta., from being head of the Saskatchewan distcirt.

DR. J. HOWARD MUNRO, Med. '03, has retired from the position of reeve of Maxville, Ont., after some years of office.

S. J. W. LIDDY, Sci. '17, has been elected President of the Men's Association of the United Church of Montreal West.

THE HON. E. FABRE SURVEYER, Law '96, of the Superior Court of Quebec, has been appointed Quebec representative on the Historic Sites and Monuments Board of Canada, succeeding J. T. Marechal Nantel, Law '12, law librarian in Montreal, who has resigned.

COLONEL THE HON. R. F. STOCKWELL, Arts '08, Law '11, Provincial Treasurer of Quebec, has been appointed a member of the Protestant Committee for Education of that province.

JOSEPH B. WALKEM, K.C., of Kingston, Ont., past student, Chancellor of the Anglican diocese of Ontario, recently celebrated his ninetieth birthday. He is one of the oldest practising barristers in Ontario.

DR. LEON E. SEMPLE, Med. '19, of St. Albans, Vt., has been appointed Chief Surgeon of the Central Vermont Railway, succeeding the late Dr. Alan Davidson, Med. '94.

HENRY W. MORGAN, Arts '13, has been elected to the presidency of the Montreal Board of Trade.

LEITRIM E. L. HARVEY, past student, has been appointed Secretary-Treasurer of the municipality of Hampstead, Que. He was formerly Secretary of the Aerocrete Construction Company.

DR. CECIL H. HANKINSON, Med. '19, has been elected President of the Medical Association of Prince Rupert, B.C., where he has been practising for some years.

MISS ALICE W. TURNER, Arts '26, has received the degree of Doctor of Philosophy in pure mathematics from the University of Toronto, following the completion of research work. Dr. Turner is a daughter of Rev. W. D. Turner, Arts '98, and Mrs. Turner, of Winchester, Ont.

DR. J. C. MEAKINS, Med. '04, Professor of Medicine, McGill University, and Chief Physician of the Royal Victoria Hospital, Montreal, was elected President of the American College of Physicians, for 1934-35, at the meeting held here in February, 1933.

PHILIP J. TURNER, F.R.I.B.A., F.R.A.I.C., of the School of Architecture, has been elected President of the Province of Quebec Architects' Association for 1933. He was also elected a library trustee for two years at the City of Westmount Municipal election in January.

MISS ETHEL L. GALE, Arts '93, Principal of Commissioners' High School, Quebec; CLAUDE A. ADAMS, Arts '05, Principal of the Granby High School; and MEADE C. HOPKINS, Arts '95, Principal of Fairmount School, Montreal, have each received the Order of Scholastic Merit, second degree, with diploma of great merit from the Quebec Department of Education. MISS ISABEL E. BRITTAIN, M.A., Arts '94, of the Montreal High School, has received the third degree of the Order, with diploma of distinguished merit.

CHARLES P. HEBERT, Arts '21, has been appointed a member of the Tariff Board of Canada. He is also a graduate of New College, Oxford, specializing in Economics and Political Science.

JOHN GODFREY SAXE, Arts '97, Chairman of the Committee on Laws of the Whist Club, New York, conducted the negotiations with the Portland Club, London, which resulted, on November 1, 1932, in the International Code on Contract Bridge.

MISS BETTY LECKY, B.H.S. '32, is now employed in the Royal Victoria Hospital, Montreal.

Births

CATE—In Montreal, on January 24, to Carroll L. Cate, Sci. '09, and Mrs. Cate, a daughter.

CLAXTON—In Montreal, On January 13, to B. Brooke Claxton, Law '21, and Mrs. Claxton, a daughter.

DAWES—In Montreal, on December 29, to Ormiston J. N. Dawes, past student, and Mrs. Dawes, a daughter.

ELDRIDGE—In Montreal, on January 17, to Kenneth Eldridge, B.Sc. (Arts) '26, of Shawinigan Falls, and Mrs. Eldridge, a son.

EREAUX—In Montreal, on January 16, to Dr. L. P. Ereaux, Med. '23, and Mrs. Ereaux, a daughter.

GILMOUR—At Hamilton, Ont., on January 29, to William A. T. Gilmour, Sci. '25, and Mrs. Gilmour, a daughter.

GLASSCO—In Montreal, on November 15, to E. D. Glassco, past student, and Mrs. Glassco, a daughter.

HARVEY—In Montreal, on November 27, to Leitrim E. L. Harvey, past student, and Mrs. Harvey, a daughter.

HEENEY—In Montreal, on January 17, to Arnold D. P. Heeney, Law '30, and Mrs. Heeney, a son.

MARLER—In Montreal, on November 20, to George C. Marler, Law '22, and Mrs. Marler, a son.

PATTON—In Montreal, on December 2, to Donald R. Patton, Com. '25, and Mrs. Patton (Violet A. Kayser, Arts, '26) a son.

ROBERTON—In Montreal, on January 2, to K. B. Roberton, Sci. '20, and Mrs. Roberton, a daughter.

ROBERTSON—In Montreal, on December 7, to A. Murray Robertson, Sci. '21, and Mrs. Robertson, of Quebec, a daughter.

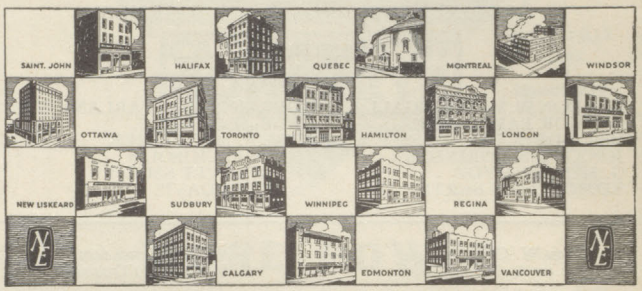
ROGERS—In Montreal, on November 28, to Dr. James T. Rogers, Med. '04, and Mrs. Rogers, a son.

RUTHERFORD—In Montreal, on January 21, to A. S. Rutherford, Sci. '22, and Mrs. Rutherford, a daughter.

SIMS—In Ottawa, on December 15, to Dr. Herbert L. Sims, Med. '06, and Mrs. Sims, a daughter.

SWABEY—In Montreal, on January 7, to Alan Swabey, B. Com. '30, and Mrs. Swabey (Nee, Helen Louise Smart, past student) a son.

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C. Russell McKenzie, K.C. Paul Gauthier
J. Leigh Bishop Claude S. Richardson
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John G. Porteous Hazen Hansard
G. Featherston Osler John de M. Marler

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Marriages

BAIN—At Guelph, Ont., on December 16, Miss Mary Edith Kilgour, and Professor James W. Bain, Sci. '14, of the University of Toronto.

COOPER—At. Saint John, N.B., on December 27, Miss Marjorie Elizabeth Evans, and Professor Douglas LeBaron Peter Cooper, Ph.D. '29, of Dalhousie University, Halifax.

DUNN—At Watertown, N.Y., on January 3, Miss Theodore McGregor, and Richard Dunn, of Jamestown, N.Y., a medical student at McGill University.

FITCH—On June 26, 1932, Miss Esther Fitch, Arts '23, and Monte Kandel, Esq. Mr. and Mrs. Kandel will reside in New York City.

GREAVES—In February, in Montreal, Miss Catherine Elizabeth Clark, and Dr. Harold Layland Greaves, Dent. '25, both of Montreal.

HOME—On July 1st, 1932, Miss Nora Home, B. Com. '29, and W. W. Bride, of Cranbrook, B.C.

SHARPLES—On December 28, 1932, Miss Doris K. Sharples, Arts '22, and Clifford Powell, Montreal.

STOCKTON—On November 9, 1932, Miss Margaret Stockton, B.Sc. '31, and James Redpath, of Porcupine, Ont.

TAPRELL—In Calgary, on February 15, Miss Jane Taprell, Arts '31, and Walter E. Huckvale. Mr. and Mrs. Huckvale will reside in Lethbridge, Alta.

WISDOM—On November 12, 1932, Miss Bessie Wisdom, Arts '09, and Dwight H. Burns, Sutherland's River, N.S.

WRIGHT—On November 10, at Glen Sandfield, Ont., Miss Sarabel Fraser and Dr. Charles Burton Wright, Med. '29, of Calgary, Alberta.

Class Notes of Commerce, 1924

By H. G. MARPOLE, Esq., *Class Secretary*

J. M. PACKHAM, B.Com. '24, is in Toronto with the Drummond McCall Company.

R. A. JACOBS, is in the property management and insurance business, and is manager of the Somerset Apartments on Sherbrooke Street. He tells me that Ed. Friedman is also in the insurance business.

A. USHER, is in the advertising department of the Victor Talking Machine Company.

DICK WILSON, who married Helen Tatlow, is living in Victoria, and is engaged in the automobile business.

ROSS WILSON is now living in Vancouver.

BLAKE WILSON, is a member of the firm of Pat Burns & Company in Vancouver.

CECIL ROBINSON is engaged in the coal business in Windsor, Ont.

JOHN MARSH is now publishing and operating the Amherstburg "Echo" in Ontario.

DAVID MORRICE is at the present time putting in a lot of hard work studying painting. He is also making a comeback in the tennis world, and gave a very good account of himself in the indoor tennis championship recently held in the Indoor Tennis Club.

GRANT AMABLE is doing very well with an oil company in the United States.

ANDY STARKE is a manufacturers agent. He was one of the earlier members of the class who joined the ranks of the Benedicts.

FRANK WINDSOR is in Montreal engaged in accountancy, and is with the firm of Clarkson, Macdonald, Currie & Company.

ANSON McKIM is in Toronto, and is with the Canadian Industries Limited.

HARRY G. MARPOLE himself, is engaged in the insurance business.

Deaths

BAIRD, DR. JAMES GORDON, Med. '70, died in Riverdale, Calif., December, 1932.

BLOW, DR. T. HENRY, Med. '95, leading eye, ear and throat specialist of Calgary, died in Vancouver, on December 27, 1932.

CARTY, BRIG.-GEN. JOHN J., LL.D. '17, in Baltimore, Maryland, on December 27, 1932.

CHRISTIE, DR. WILLIAM, Arts '84, Med. '87, died in Chicago, Ill., January 3, 1933, aged 71.

CONGLETON, JOHN BROOKE MOLESWORTH PARNELL, THE RIGHT HONOURABLE SIXTH BARON, Sci. '21, died in London, England, December 20, 1932.

DECARIE, JOSEPH NOEL FELIX, Law '99, died in Montreal, November 15, 1932, aged 57.

FAIRIE, DR. JAMES ARTHUR, Med. '09, died in Montreal, January 8, 1933, aged 59.

FLEMING, ROONEY ROBERT, Med. '70, died at Auburn, Calif., on December 21, 1932, in his 91st year. For eighteen years, Dr. Fleming was President of the Placer County Medical Society.

FOSTER, PHILIP, B.A.Sc. '82, in New York City, on November 15, 1932.

GORDON, ASA, B.C.L. '67, one of Ottawa's oldest and most distinguished lawyers, died February 17, 1933, aged 86 years.

GRAHAM-BROWN, J. CARLYLE, B.A. '23, of Toronto, was killed in an automobile accident near Nelson, Ont., on February 4, 1933.

GRAHAM, DR. WILLIAM CHARLES RAY, Med. '92, died at Winthrop, N.Y., November 26, 1932, aged 64.

HOGAN, DR. EDWARD VINCENT, Med. '96, died in Halifax, N.S., January 20, 1933.

JONES, SIR ROBERT, BART., LL.D. '23, in Llangechain, Montgomeryshire, Wales, on January 14, 1933.

McCURDY, DONALD READING, B.A. '31, age 24, son of Hon. F. B. McCurdy of Halifax, died suddenly in Paris, on February 17, 1933.

MOSS, REV. WM. T. D., B.A. '90, died at Chapel Hill, North Carolina, on October 7, 1932.

PALMER, DR. GUY F., Med. '85, in Ucuelet, B.C., in January, 1933.

ROONEY, DR. ROBERT FIELDING, Med. '70, died in Auburn, Calif., December 21, 1932, aged 90.

SIMPSON, DR. CHARLES R., D.V.S. '91, died April 27, 1932, in Hollywood, Calif.

THAYER, DR. W. S., LL.D. '29, in New York City, on December 10, 1932.

VIPOND, WILLIAM STANLEY, M.Sc., Sci. '08, died in Montreal, December 1, 1932, aged 44.

WILSON, ROBERT MANSON, Sci. '99, died in Montreal, January 4, 1933.

Lost Addresses (Continued from Page 57)

Way, Wm. Russell B.Sc. '18
Weber, Karl Rudolph B.Sc. '12
Webster, George Boyd B.Sc. '04
Wells, Franklin Burnham M.Sc. '31
Wenger, Ed. Isaac B.Sc. '01
Wevrick, Noah A. B.A.Sc. '25
White, Roy Mason M.Sc. '26
Wilder, Hartland B. B.Sc. '22
Wilkins, J. D. B.Sc. '16
Wilkins, Arthur G. B.Sc. '16
Williams, Francis Geo. Maxwell B.Sc. '10
Williams, Fred. Harold B.Sc. '07, M.Sc. '21
Williams, Harold Miles B.Sc. '29
Williams, Sydney Waldron B.Sc. '24
Wilson, F. E. B.Sc. '29
Wilson, James M. B.Sc. '22
Windeler, Henry Stanton B.Sc. '14
Wood, James Alonzo B.Sc. '14
Woodward, C. D. B.Sc. '22
Wu, Chow Chu M.Sc. '16
Wyse, James Wilson B.Sc. '24

Y

Young, John Melvin B.Sc. (Arts) '27, M.Sc. '28

Z

Zoond, Alexander M.Sc. '25



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Montreal Branch Society

ANNUAL ALUMNI SMOKER

About three hundred Graduates attended the fourth annual smoker in the Union on February 2, when short addresses were given by P. D. Ross, President of the Society, G. McL. Pitts, President of the Montreal Branch, H. S. Maxwell, of the Red Birds Ski Team, and Dr. R. B. Bell, Manager of the McGill Hockey Team. George C. McDonald, a Governor of the University, delivered the main speech on "The Challenge of the Debt Situation." He advocated a simplification of the country's tax problem through a graduated income tax to be levied by the Dominion Government and divided by it among the provinces and municiaplities as required. The McGill University Band, the McGill Glee Club, members of the Red and White Revue, and other undergraduate organizations generously contributed to the entertainment programme. A special issue of *The McGill Daily* was produced for the occasion.

GRADUATES' THEATRE NIGHT AND SUPPER DANCE

This year the Montreal Branch Society held its annual Graduates' Theatre Night on the occasion of one of the plays presented by the Players' Club, who had selected, "He Who Gets Slapped" by Andreyev.

This play was adequately presented on the evening of February 9th and after the performance about fifty couples continued the evening's enjoyment by attending the first Graduates' Supper Dance, given by the Montreal Branch Society. This was held in the McGill Union, which had been attractively decorated with college flags for the occasion, the supper decorations consisting of red and white flowers and candles in silver candelsticks. The host and hostess for the evening were Mr. and Mrs. G. McL. Pitts, and the head table guests included Officers from the Montreal Branch Society. the Alumnae Society and the Women Associates of McGill.

GRADUATES' REUNION DINNER

(Classes of 1926-1930)

On the evening preceding the Toronto 'Varsity-McGill Football game a successful banquet was held in the Windsor Hotel, when one hundred and sixty graduates of the five years from 1926 to 1930, gathered to renew old associations under the auspices of the Montreal Branch Society, and

the chairmanship of Mr. S. B. Millen, Arts '27, Law '30. The guest of honour, Dr. Stephen Leacock, assisted in making the evening an enjoyable one by giving a very humorous short address.

The Graduates' Endowment Fund

About ten years ago this fund was started as a means for graduates, who desired to show appreciation of their educational debt to the University, to make contributions (annual or otherwise) to a fund which was to be administered so that its capital would be kept intact while the revenue earned by it would be "used for the assistance and advancement of McGill University."

That each graduate does incur a debt of about two-thirds of the cost of his university education is shown herein on the chart on page 6, where also the purpose for which the Fund was started is set forth.

The Fund in its first ten years has been fairly successful. Perhaps no more should be expected in the establishment of a Fund on a new idea, dependant for real success on a sympathetic understanding and acceptance of it by each and every graduate.

A recent audit of the Fund has revealed the following figures (cents omitted) which will be of interest to many graduates:—

Year	Amount of Subscriptions Received	Income from Invested Capital	Expenditures from Income
1923 and 1924	$14,350	$ 447	$1,058
1925.....	4,977	741	227
1926.....	4,554	963	3*
1927.....	3,585	1,377	1*
1928.....	9,737	1,627	43*
1929.....	10,837	2,190	24*
1930.....	8,348	2,946	543
1931.....	6,333	3,482	3,476
1932.....	2,276	4,062	62
Totals...	$65,001	$17,837	$5,442

Adding the unexpended income ($12,395) to the capital sum ($65,001) gives an amount which is mostly invested in bonds. At Sept. 30, 1932, there were bonds on hand of a total purchase value of $75,492 (face value, $77,000); and cash on hand, $1,904.

* In these years the Graduates' Society bore the expenses incurred in sending out the circular letters asking the graduates for subscriptions to the fund.

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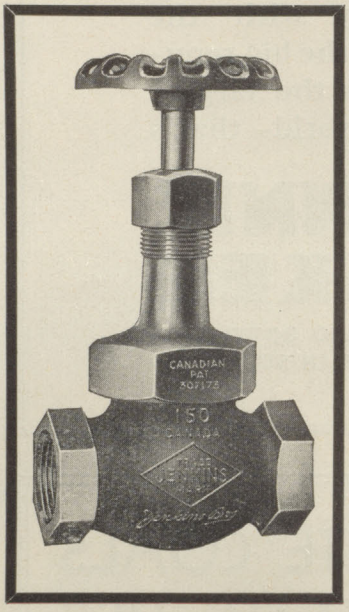


Fig. 106-A.—Bronze Globe Valve with Screw-Over Bonnet and Slip-on, Stay-on Disc Holder.

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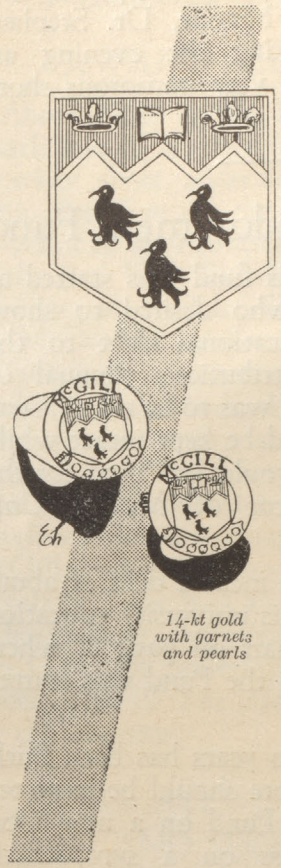
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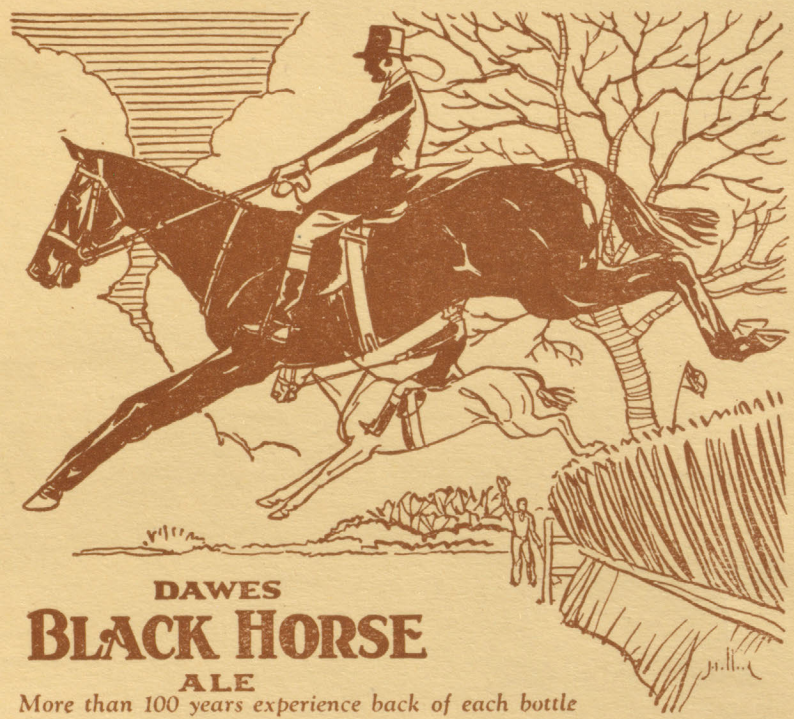


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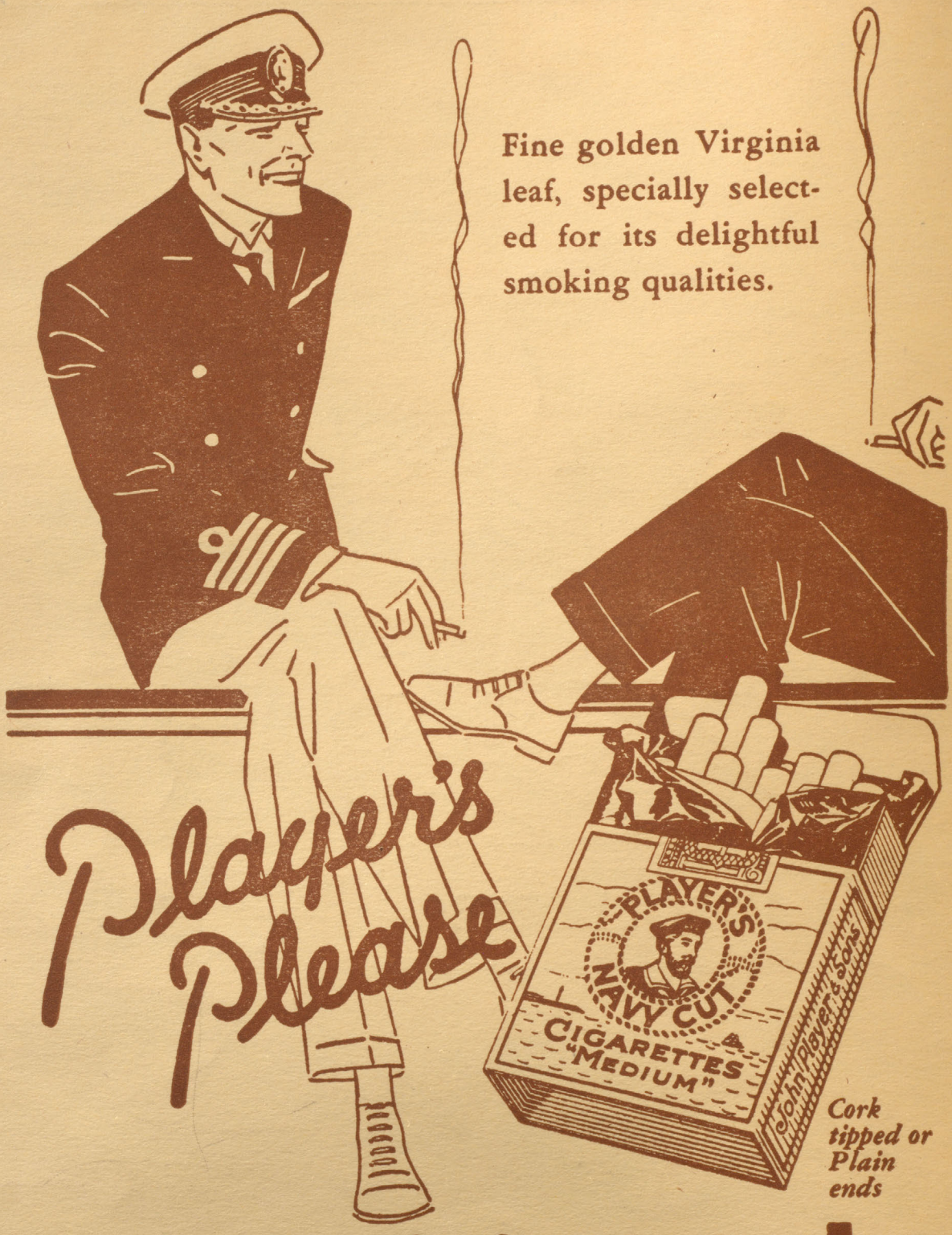
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McGILL NEWS

VOLUME 14 JUNE, 1933 NUMBER 3

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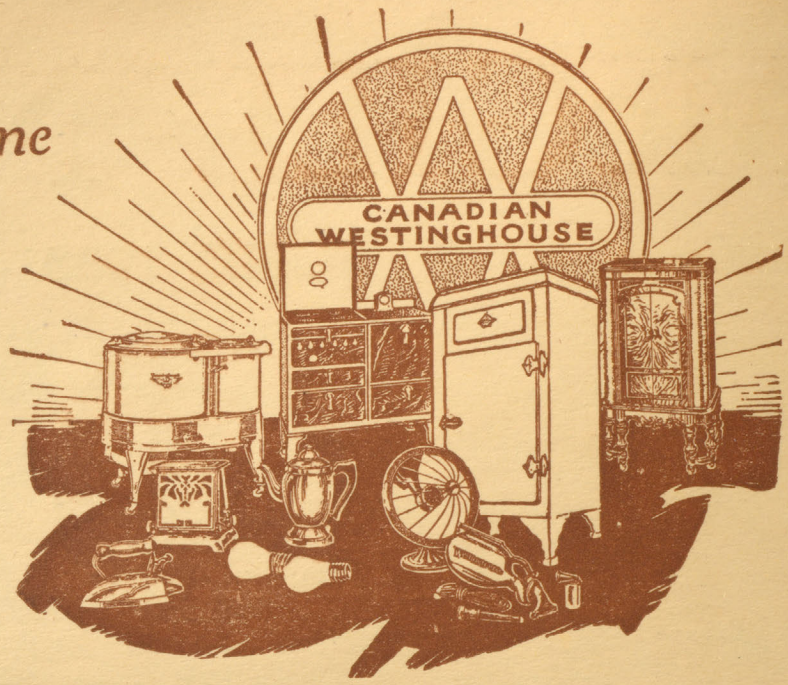
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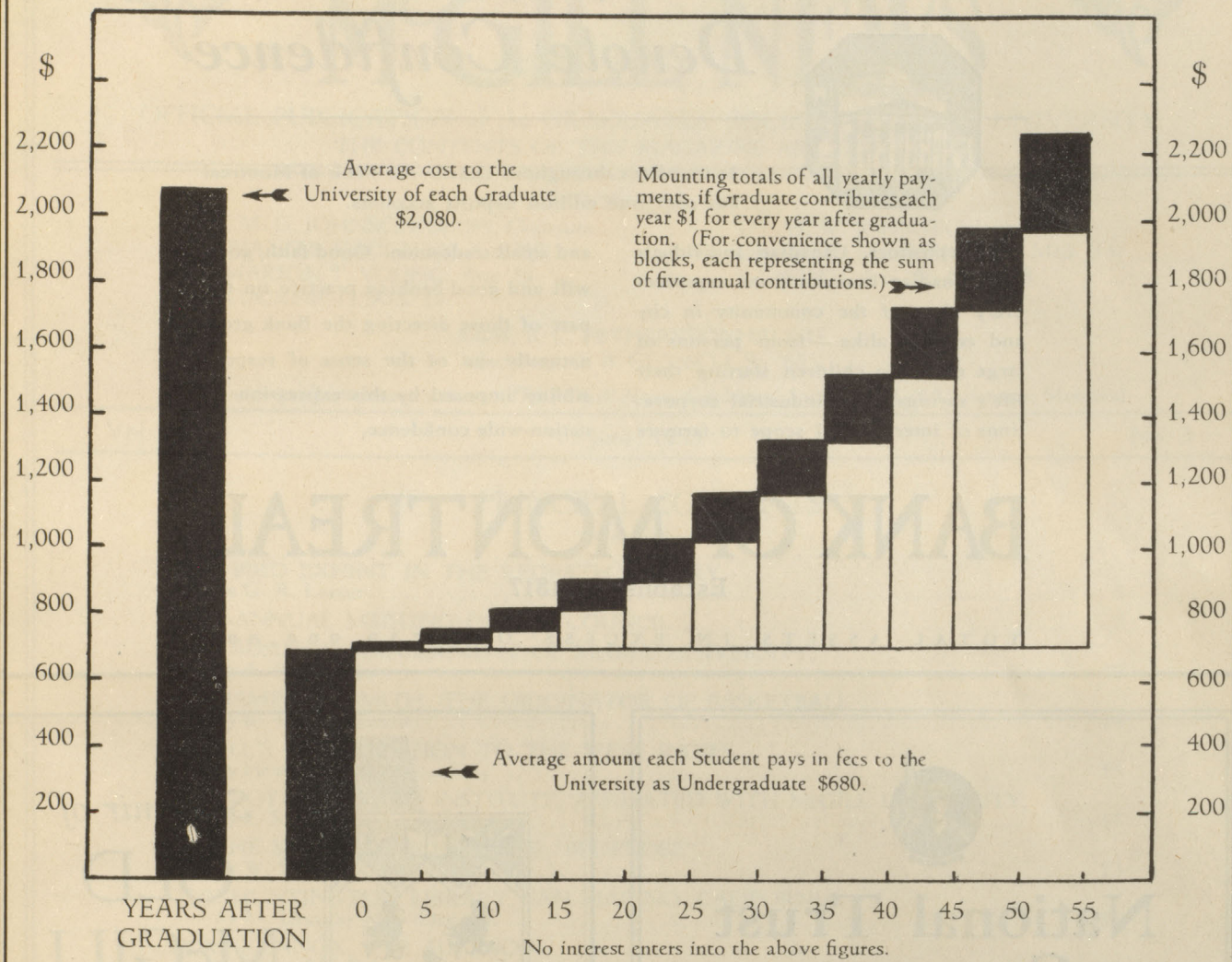
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HOW TO PAY FOR YOUR EDUCATION THROUGH THE GRADUATES' ENDOWMENT FUND



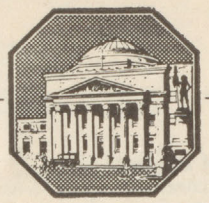
No interest enters into the above figures.

EACH student in the University is contributing in fees only one-third of the cost of his education, and the other two-thirds is being provided from the capital resources of the University, which have been donated in the past in the form of endowments for buildings, professors' chairs, general purposes, etc. The financial statements of the University show that the average student who has been four years at college has cost the University $2,080 for his education; and he has benefitted by expenditures on him in excess of the amount he has paid in fees by about $1,400. This financial benefit is increasingly greater to those who take courses requiring more than four years at college, such as Medicine, Law and Engineering.

The above chart is designed to show this financial obligation of each graduate to the University and how it may be discharged by making annual contributions to the Graduates' Endowment Fund. When this Fund was started ten years ago, it was suggested that graduates might each subscribe annually a sum amounting to $1.00 a year for each year after graduation; and the chart shows that the average graduate of a course of four years at college would pay back his cost of education to the University about fifty-two years after graduation, if he were one of those who fortunately would live to such a ripe old age. This chart also explains the purposes of those who, ten years ago, suggested this scale of subscriptions to the Graduates' Endowment Fund; and this may be valuable to many graduates who unfortunately did not understand the object of this proposed scale of subscriptions, even though explanatory circular letters were sent out from year to year.

The Endowment Fund Committee wishes all graduates to know that it welcomes any amount subscribed to the Fund, for it realizes that it is of more benefit to the University to receive small subscriptions from all the graduates, than to get large subscriptions from a few. For the past few years, the Endowment Fund Committee has not made its annual appeal to the graduates for subscriptions to the Graduates' Endowment Fund, on account of general economic conditions; but it is desired that the principles on which the Fund was founded should be kept before the graduate body.

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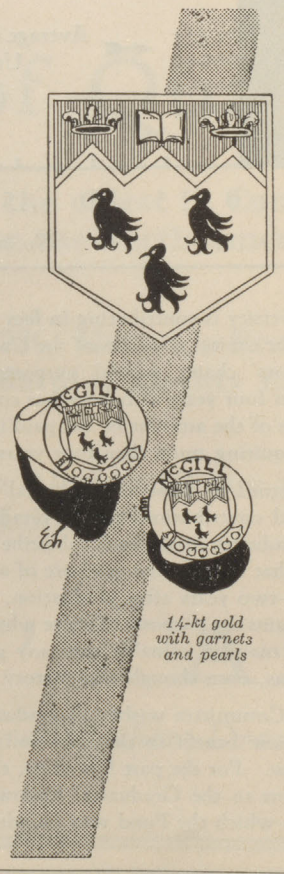
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Please address all communications to *The McGill News*, Graduates' Society, McGill University, Montreal

Vol. XIV June, 1933 No. 3

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MRS. G. C. McDONALD, Arts '05
R. F. STOCKWELL, Arts '08, Law '11
C. F. COVERNTON, Med. '05

R. A. H. MacKEEN, Med. '24
D. C. ABBOTT, Law '21
A. G. L. McNAUGHTON, Sci. '10

MISS C. I. MACKENZIE, Arts '04
G. F. STEPHENS, Med. '07
E. C. AMARON, Arts '23

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G. C. McDONALD, Arts '04
W. A. GRAFFTEY, Sci. '14

D. S. FORBES, Sci. '11, Arch. '15
A. N. JENKS, Dent. '20
M. F. MACNAUGHTON, Sci. '22

J. T. HACKETT, Law '09
G. McL. PITTS, Sci. '08, Arch. '16
J. G. NOTMAN, Sci. '22

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PAUL F. SISE, Sci. '01
G. S. CURRIE, Arts '11

Athletic Board

S. B. MILLEN, Arts '27, Law '30
P. P. HUTCHISON, Arts '16, Law '21
G. B. GLASSCO, Sci. '05

Advisory Board of Students' Council

R. E. JAMIESON, Sci. '14
N. W. PHILPOTT, Med. '26

McGill University Graduates' Endowment Fund

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MRS. J. HAROLD, *Assistant Treasurer*
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MISS A. MORTON, *Assistant Corresponding Secretary*
MISS M. CREBER, *Recording Secretary*
MISS J. MARSTERS, *Assistant Recording Secretary*
MRS. M. W. MACKENZIE, *Membership Committee*
MISS R. MURRAY, *Library Committee*
MISS J. KYLE, *Tea Committee*
MISS M. YOUNG, *Representative "McGill News"*

Other Affiliated Societies of McGill Graduates

District of Bedford
COL. R. F. STOCKWELL, *President*
Cowansville, Que.
REV. E. M. TAYLOR, *Secretary*
Knowlton, Que.

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J. P. BALL, *President*
2514 East 73rd Place, Chicago, Ill.
C. W. STOKES, *Secretary*
3958 Calumet Avenue,
Chicago, Ill.

Detroit
DR. FRANK J. MURPHY, *Pres. & Sec.*
Harper Hospital, Detroit, Mich.

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DR. JOHN G. McDOUGALL, *President*
95 Spring Garden Road, Halifax, N.S.
DR. K. A. H. MacKEEN, *Secretary*
Dalhousie University, Halifax, N.S.

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Rockland State Hospital
Orangeburg, N.Y.

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835 Tegler Building, Edmonton, Alta.

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54 The Driveway, Ottawa, Ont.
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718 Granville Street, Vancouver, B.C.
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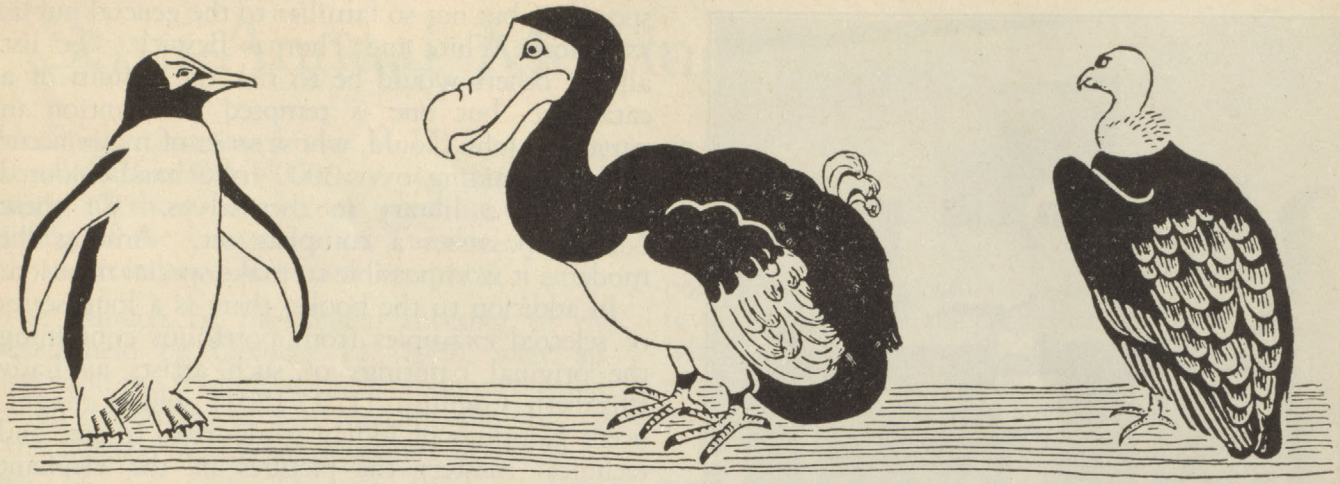
Winnipeg
DR. G. F. STEPHENS, *President*
Winnipeg General Hosp., Winnipeg, Man.
R. V. SLAVIN, *Secretary*
55 Princess Street, Winnipeg, Man.

Graduates' Representative Fellows on Corporation

In Medicine, A. G. NICHOLLS, Arts '90, Med. '94
D. GRANT CAMPBELL, Arts '04, Med. '08
In Law, D. CUSHING, Arts '07, Law '10
B. BROOKE CLAXTON, Law '21
In Engineering, G. McL. PITTS, Sci. '08, Arch. '16
R. J. DURLEY, Sci. '98
In Arts, J. W. JEAKINS, Arts '13
S. G. DIXON, Arts '11, Law '14
In Agriculture, E. A. MacMAHON, Agr. '18
In Dentistry, H. R. CLEVELAND, Dent. '15
In Music, DOROTHY ARMSTRONG, Mus. '16
Maritime Provinces and Newfoundland, J. G. MacDOUGALL, Med. '97
Province of Ontario, T. T. IRVING, Sci. '98
Western Provinces, A. C. RUTHERFORD, Arts '81, Law '81
Countries outside Canada, E. E. BILLINGTON, Sci. '13

The Graduates' Society Employment Bureau, McGill University

The Bureau gives free information and assistance to all graduates and past students, and helps employers to secure the personnel they may desire.
Address the bureau as above. Miss G. J. Williams, Secretary.



The Bird Exhibit in the Redpath Library

(May 15 - September 1, 1933)

By G. R. LOMER, M.A., Ph.D.

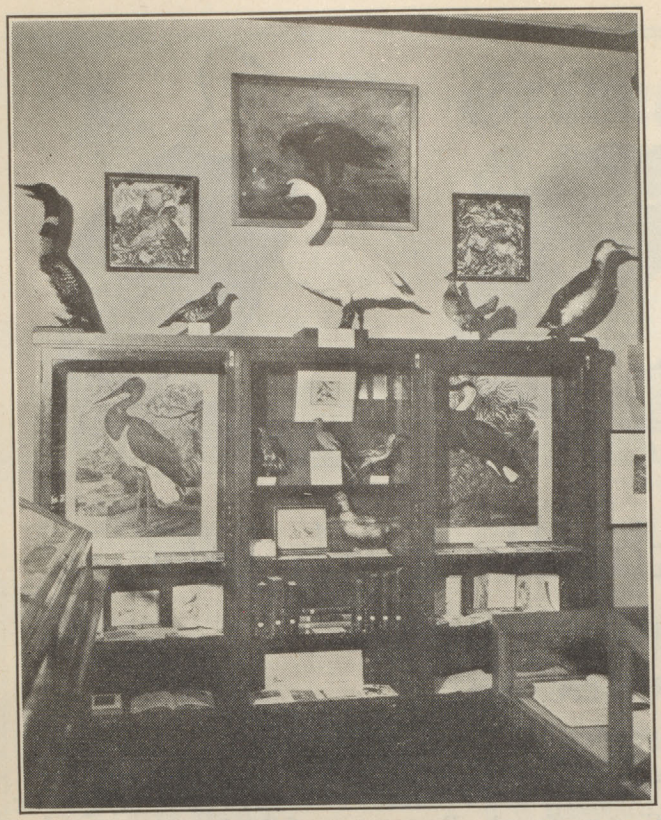
(*University Librarian*)

THE unusually fine collection of over 4000 original paintings and drawings of birds in the Emma Shearer Wood Library of Ornithology is perhaps not as well known as it might be to McGill graduates. An opportunity to see a representative selection of these, together with rare books from the Blacker Library of Zoology and the Bibliotheca Osleriana, is provided by an exhibit which opened in the Redpath Library on May 15 and which will continue throughout the summer.

A touch of three-dimensional reality is added to the pictures by numerous mounted birds, selected by Mr. S. Chambers from the collection in the Redpath Museum and including a specimen of the Whistling Swan, carried over Niagara Falls in 1929, the Labrador Duck which became extinct in 1875, and the Passenger Pigeon in 1914; and other birds ranging in size from the humming bird to the wild turkey. Beside the eggs of the ostrich and the emu, there is a bisected fossil egg of the Tropic Bird, found fifteen feet below the surface in Bermuda; and specimens of the American woodcock. Concerning this last, there is an interesting scrapbook of drawings by the naturalist George Cumberland (1754-1848) showing the earliest known drawings of its flexible upper mandible. These drawings antedate the recorded fact that this flexibility of the upper mandible was discovered by Gurdon Trumble in 1890; as will be pointed out in a forthcoming article by Mr. Henry Mousley, Treasurer and President of the Province of Quebec Society for the Protection of Birds and a member of the American Ornithologists' Union, whom the Library is fortunate in having to assist in the cataloguing of the drawings of birds. By him and by Miss Elizabeth Abbott, McGill, Arts '19, Assistant in the University Library, the informative historical and scientific notes for the exhibit were provided.

The intention of the present exhibit is threefold: its main purpose is to give a general view of the historical development of the scientific illustration of bird-life; but it also aims to interest children in the knowledge and preservation of birds; and last but not least to honour that generous donor to whom the Library owes directly and indirectly its magnificent collections of books on ornithology and general zoology, Dr. Casey A. Wood, LL.D.

It was in 1920 that Dr. Wood established the Emma Shearer Wood Library of Ornithology in honour of his wife; and a few years later he interested his friends, Mr. and Mrs. Robert Roe Blacker, in the foundation of a library of zoology. These two collections form a special scientific library, known throughout the world as being particularly rich in early works, periodicals, and scientific society reports, as well as rare monographs and illustrations. These have been listed and described in "An Introduction to the Lit-



THE BIRD EXHIBIT

This photograph shows one of the cases composing the exhibit now open in the Redpath Library.

erature of Vertebrate Zoology" compiled by Dr. Wood and published by the Oxford Press in 1931.

The historical portion of the exhibit begins with the magnificent edition of the "Historia Naturalis" of the younger Pliny, which Jenson printed at Venice in 1472. It is followed by Aristotle, of whose work McGill possesses over 20 editions. In the "Libri de Animalibus," Venice 1476, Aristotle described over 70 birds. Albertus Magnus and Bartholomaeus Anglicus are followed by a fine coloured folio of the "Hortus Sanitatis Major," in which 122 birds are described. The later volumes include such authors as P. Bellonius, Conrad Gesner, and Francis Willughby, who published in 1676 the first systematic classification of the birds of the world, completed by John Ray. The Library is particularly fortunate in possessing another copy of this work published in 1678 and unique in that it comes from the library of Samuel Pepys and is the only known coloured copy of this edition.

The eighteenth century authors whose illustrated books are shown include the Comte de Buffon, Eleazar Albin, George Edwards, Carl von Linné, Mark Catesby—all names known to the specialist, but not so familiar to the general public as Gilbert White and Thomas Bewick. To list all the others would be to risk the tedium of a catalogue, but one is tempted to mention in particular John Gould, whose series of magnificent folios containing over 3000 folio hand-coloured plates are a library in themselves. Of these McGill possesses a complete set. Among the moderns it is impossible to make special mention.

In addition to the books, there is a long series of selected examples from portfolios containing the original paintings of such artists as Lady Elizabeth Gwillim (1783-1807) whose magnificent paintings of Indian storks rival in size and technical mastery the pictures in the elephant folios of Audubon; C. Collins, P. Paillou, Eleazar Albin, J. van Huysum, G. D. Ehret, and G. Webster, whose combined drawings number almost a thousand; and such contemporary artists as Allan Brooks, G. M. Henry, John Duncan, W. J. Belcher, and Henrik Grönvold, whose painting of Dr. and Mrs. Wood's famous parrot John III is displayed in one of the cases, near the bookplates which he adorns. It is interesting to note in passing that the bookplates for the Emma Shearer Wood Library of Ornithology and the Blacker Library of Zoology were designed by Mr. W. P. Barrett, an English artist whose work is well known and who designed the bookplate used by the late Queen Alexandra.

The exhibit is the latest of a series running over several years and arranged to show to students, graduates, and the public various interesting aspects of the collections of the University Library. Sometimes the exhibits have been historical, sometimes archaeological, artistic, bibliographic, or of interest in connection with some current anniversary, such as that of Parkman, Shakespeare, or Goethe. But in every case this educational aim has determined the selection and arrangement of material and the type of explanatory note provided.

The extent and importance of the McGill museums has been recognized within the University as a result of the survey recently made by Dr. Cyril Fox of the National Museum of Wales, and it is to be hoped that the exhibits now carefully arranged at the Redpath Museum, the McCord Museum, the Ethnological Museum in the Medical Building, and in the Redpath Library will bring before the graduates of McGill in a concrete way the desirability of extending each of these collections and eventually of erecting a University Museum Building in which these treasures can be worthily housed and exhibited in a manner that is at present only a vision of things to come.

Semi-Annual Meeting of the Council

Under the chairmanship of P. D. Ross, President of the Graduates' Society, the semi-annual meeting of the Council took place in the Arts Building of the University on Tuesday, May 9, with an attendance of twenty members.

The minutes of the annual meeting of the Council held on October 11, 1932, were approved and the reading of these brought to mind, through the reports at that meeting, the progress of the Society during the preceding session.

The report of the Honorary Secretary, Dr. L. H. McKim, then dealt largely with membership records. These showed 2,607 members in good standing at the 1st of May, of whom 205 were Life Members. Of this total, 1,063 were members of the Montreal Branch Society; 238 were members of the Alumnae Society; and 515 were members of other branch societies, located at Halifax, New York, Quebec, District of Bedford, Detroit, Toronto, Chicago, Winnipeg, Vancouver, and Victoria. The remaining 791 members were resident in localities where there is no affiliated active branch of the Society. Unfortunately the Secretary had to report that 610 members of the Society had failed to pay dues for the current session, and hence had not retained their membership. It was noted that if these members had continued their annual dues, there would be no cloud on the financial sky for the current session, as these dues would more than offset the estimated deficit for the year. Reference was made to similar losses of members each year, which seriously affect the outlook for the Society and also limit the work it is able to undertake at the present time. A report was presented on efforts recently made to interest members of the teaching staff of the University in becoming members of the Society. As all members of the staff are eligible to belong to the Society, whether they are graduates of McGill or not, the 328 members of the staff who are not members of the Society were invited recently to join. Only four took advantage of the invitation, and the Secretary reported a serious lack of interest in the Graduates' Society on the part of the staff in general.

The next report was presented by the Honorary Treasurer, W. A. Merrill, who dealt with the revenue and expenditure for the session and estimated a deficit of $1,559 at the end of the financial year September 30th. The Honorary Treasurer stated that, fortunately, the cash reserves of the Society had enabled financing to be done without the sale of any securities.

Dr. F. M. G. Johnson, Chairman of the Editorial Board of *The McGill News* then reported that, on account of a drop in advertising revenue, the size of the magazine had been somewhat curtailed, and that there was a lack of money available to make possible the plan of paying for articles for publication.

H. M. Jaquays reported for our representatives on the Board of Governors, giving a list of resignations, appointments, and promotions in the staff and referring to the University budget for the period ending May 31st, which showed an estimated deficit of $298,000. He also referred to the means taken by the Board of Governors in financing the construction, equipment, furnishing, and endowment of the Neurological Institute Building, construction of which has since been started.

AMENDMENTS TO THE CONSTITUTION.—It was reported that during the session members of the Society voted by letter ballot on amendments to the Constitution with the following results:

Art. 5, Section 1 was amended so that the President of the Montreal Branch Society and the President of the Students' Executive Council will henceforth be ex-officio members of the Executive Committee.

Art. 4, Section 1 was amended so that the representatives from the various classes on the Council of the Society, who are not active in their duties, may be replaced by Class Councillors, appointed by the Executive Committee.

Art. 4, Section 2 was amended so that representatives from Branch Societies in Montreal may have representatives on the Council of the Society.

Art. 10, Section 5 was amended similarly to Article 4, Section 1, in regard to the inactive class representatives, so that these may be replaced on the Endowment Fund Committee by the Class Councillors appointed under Art. 4, Section 1 to replace them.

In closing the meeting the President said that, in view of general conditions today, the outlook for the Society was more favourable than the reports had indicated and that, in his opinion, it was progressing satisfactorily. He drew attention to the great dependence of the Society on *The McGill News* in holding its membership. He spoke of the excellent programme of radio broadcasts which had taken place during the session under the direction of the Society.



COURTESY OF "OLD McGILL, 1933"

EXECUTIVE COMMITTEE, GRADUATES' SOCIETY OF McGILL UNIVERSITY, 1932-1933

G. McL. Pitts L. C. Montgomery A. S. Dawes G. B. Glassco
W. A. Merrill J. W. Jeakins P. D. Ross G. G. Gale L. H. McKim

In Absentia: (H. M. Jaquays, J. de G. Beaubien, A. T. Henderson)

DETAIL	NO BRANCH AFFIL'N.	MONTREAL BRANCH	ALUMNAE SOCIETY	OTHER BRANCHES	TOTALS FROM LEFT TO RIGHT
Members—Annual Dues Paid for the current session	719	960	235	488	2,402
Life Members	72	103	3	27	205
Total Members in good standing	791	1,063	238	515	2,607
Other Members, Dues unpaid for current session	224	202	63*	121	610

SUMMARY OF MEMBERSHIP IN THE GRADUATES' SOCIETY OF McGILL UNIVERSITY
MAY 1st, 1933

*These 63 former members were dropped from membership by the Alumnae Society, in accordance with their usual practice, at Dec. 1st, 1932. The remaining members of the Society who have not paid their dues were dropped at June 1st, in accordance with the decision of the Executive Committee at its last meeting, May 1st, 1933.

Before closing, the President dwelt on the importance of the gymnasium project being developed by a committee of the Graduates' Society and said he hoped it would soon be possible to make a report on favourable progress in this work.

Nominations for Annual Elections

In accordance with the Constitution, it was reported to the Honorary Secretary of the Society at May 1st that the Nominating Committee had selected the following members' names to appear on the ballots sent out for the elections during the summer months. Additional nominations may be made, if signed by at least fifteen members of the Society and if received before the 10th of July.

For Representative on the Board of Governors.—One to be elected. Term three years.
Paul Fleetford Sise, B.Sc. 1901

For Second Vice-President.—One to be elected. Term Two years.
General A. G. L. McNaughton, M.Sc. 1912, LL.D. 1920
James deGaspé Beaubien, B.Sc. 1906

For Honorary Secretary.—One to be elected. Term Two years.
Shirley Greenshields Dixon, B.A. 1911, B.C.L. 1914
Fraser Sanderson Keith, B.Sc. 1903

For Honorary Treasurer.—One to be elected. Term two years.
Henry Robert Mulvena, B.C.L. 1913
Douglas Bremner, B.Sc. 1915

For Executive Committee.—Two to be elected. Term two years.
Herries Stirling Maxwell, B.Arch. 1928
Dr. Herbert Munro Elder, M.D.C.M. 1923
Mrs. Gordon St. George Sproule, B.A. 1904 (Nee Helen Louise Freeze)
James Somerville Cameron, B.Sc. 1908

For Council of the Graduates' Society.—Five to be elected. Term two years.
A. D. Campbell, M.D.C.M. 1911
Hilary V. Bignell, B.Sc. 1915
William Brown Thompson, B.Sc. (Arts) 1928
David R. Logan, B.A. 1926
William Scarth Fry, B.A. 1928
Dr. William Henry Walker, D.D.S. 1929
Mrs. W. L. Grant, B.A. 1903 (Nee Maude E. Parkin)
George Edward Tremble, M.D.C.M. 1921
Howard Chancellor Dixon, M.D.C.M. 1913
John James Ower, B.A. 1905, M.D.C.M. 1909
Ernest H. Falconer, M.D.C.M. 1911
Russell B. Robertson, M.D.C.M. '13.

For Graduates' Representative Fellows on Corporation.—One to be elected in each case, and term for each is three years.

In Arts and Science—
F. Gerald Robinson, B.A. 1905
Mrs. George C. McDonald, B.A. 1905 (Nee Mary Alice Hitchcock)

In Engineering—
Witham Taylor-Bailey, B.Sc. 1916
Kenneth Meikle Perry, B.Sc. 1908, B.A. 1906

In Dentistry—
Dr. Victor Henry Jekill, D.D.S. 1925
Dr. James Cyril Flanagan, D.D.S. 1923

In Music—
Miss Dorothy L. F. Armstrong, Bach. Mus. 1916
Mrs. Ruby Hatch Green, Bach. Mus. 1928

The Business Management of McGill University

(A memorandum Presented to the Board of Governors, April 19, 1933)

By A. P. S. GLASSCO
(Secretary and Bursar of the University)

The corporate title of the Governors of McGill University is The Royal Institution for the Advancement of Learning, and the members thereof are Governors of McGill University.

HOW CONSTITUTED.—The Royal Institution for the Advancement of Learning is a public corporation, part of the Government organization of Quebec. The original Act of 1803 has been frequently amended and none of it is now operative except that the corporation has had a continuous existence. James McGill bequeathed his property to the Royal Institution in trust for a University to be formed.

McGill University is a separate corporation established by Royal Charter in 1821. Since then all property has been held by the Royal Institution as trustee for McGill University as beneficiary. Certain restrictions were established by statute on the investments which the Governors, that is the Royal Institution, might make—and they were also bound by all the various Trustee Acts passed by the Provincial Legislature.

By two special Acts, 26 Vic. Cap. 6 and 1 Geo. V Cap. 91, the Provincial Government gave up all its rights to determine the constitution of the Royal Institution, provided that the Royal Institution should be constituted under statutes to be passed by the University and gave the University power to regulate its affairs.

Chapter II, Section 1, of the Statutes of the University reads as follows: "The number of Trustees, Members of the Royal Institution for the Advancement of Learning, Governors of McGill College and University, shall not be more than twenty-five in all, of whom the Principal of the University shall ex-officio be one, and of this number three shall be elected by the Graduates' Society of McGill University, one each year, and shall hold office for a period of three years from the date of such election, provided always that before such election takes place the names of those nominated for election shall be first approved by the Board."

Chapter II, Section 3, says: "No person shall be eligible for appointment or election as a member of the Board unless he be a British subject and a layman of some Protestant denomination."

POWERS OF GOVERNORS.—By a University statute dated May 25, 1923, it was provided that the Governors might deal with all University property in their absolute discretion.

The Governors appoint and fix the salaries of all officers including those of instruction and research, likewise all employees and servants of the University are appointed under the authority of the Board.

The Board may amove any officer from the University upon grounds of immorality, inefficiency, or for any administrative or other cause which in the opinion of the Governors affects adversely, or is likely to affect adversely, the general well being of the University. The Board may also retire any officer of the University after he has attained the age of sixty-five years.

THE VISITOR.—The Charter of the University provides that the Governor-General of Canada is the Visitor of the University. The Visitor is the Court of Appeal for any member of the teaching staff of the University whom the Board of Governors may in its discretion amove from office.

THE CHANCELLOR.—Chapter II, Section 4, of the Statutes of the University reads as follows: "The President of the Royal Institution for the Advancement of Learning shall be elected from time to time by the Board of Governors from among its members. The President shall also bear the title and discharge the functions of Chancellor of the University."

THE PRINCIPAL AND VICE-CHANCELLOR.—Chapter VIII of the Statutes reads as follows: —

"1. The Principal shall be the chief executive officer of the University and shall have general supervision over and direction of the University and the teaching staff thereof, and the officers employed in connection with its work, including the officers of administration, and shall also have such other powers and perform such other duties as from time to time may be conferred upon or may be assigned to him by the Board of Governors.

2. The Principal shall also bear the title and discharge the functions and duties of Vice-Chancellor of the University.
3. He shall be a member of Corporation and of all University Faculties and when present shall preside thereat.
4. He shall have power to suspend any member of the teaching staff of the University and any officer and servant thereof, and when he shall exercise such power he shall forthwith report his action to the Board, with a statement of his reasons therefor, and the Board may then take such action in the matter as it shall see fit.
5. He shall make recommendations to the Board as to all appointments to, and all promotions in, and all removals from the staff of the University and of any officer thereof.
6. He may, at his discretion, convene joint meetings of all the Faculties or of any two or more of them.
7. He shall report annually to the Visitor upon the work of the University, and its requirements, and make such recommendations thereon as he may deem necessary."

THE HONORARY TREASURER.—In observance of the regulations for signing cheques and other legal documents, it has become the practice for the Honorary Treasurer to sign practically all such papers. While this practice demands a great deal of the time of this Governor, it has the great advantage to the University of bringing him into close touch with the Secretary and Bursar's office.

THE FINANCE COMMITTEE

HOW CONSTITUTED.—This Committee is appointed by the Board from among its members, and usually consists of nine of whom the Chancellor and Principal are ex-officio members. It has been customary to appoint the Honorary Treasurer of the University (a Governor) Chairman of this Committee.

POWERS OF COMMITTEE.—Subject to a general policy as laid down by the Governors as to diversification in the different types of securities the Board delegates to the Finance Committee authority to invest the funds of the University. For this purpose an Investment Committee is appointed by the Finance Committee from among its members.

Certain members of the Finance Committee are authorized to sign legal documents such as Cheques, Hypothecs, Conveyances of Property, Delays of Payment, etcetera, necessary to the carrying on of the University's business.

THE SECRETARY AND BURSAR.—This Officer acts as Secretary of the Board of Governors, of the Finance Committee and of any other Committees appointed by either of these Bodies. A general statement as to his other duties and responsibilities appears in Chapter X, Section 2, of the Statutes.

THE COMPTROLLER.—The Comptroller is in charge of the Bursar's Office and reports to the Secretary and Bursar.

THE SUPERINTENDENT OF BUILDINGS.—The Superintendent of Buildings is responsible for the maintenance and protection of buildings and grounds and for the operation of the light, heat and power system. He reports to the Secretary and Bursar.

THE REGISTRAR.—The Registrar has nothing to do with the finances of the University. He acts as Secretary of the Corporation, of Convocation and of the Matriculation Board. He edits the University Calendar and all Faculty Announcements. He is in charge of registration of students.

CONTROL OF EXPENDITURES.—These are controlled by the Governors through a yearly budget. The fiscal year of the University runs from June 1st to May 31st and all appropriations granted in the budget cover expenditures for that period only. The procedure adopted for the preparation of the budget is as follows:—

Each year in the month of March there is sent to the Heads of the Academic and Administrative Departments an application form for appropriations.

When the Head of an *Academic* Department has filled in this form he forwards it to the Dean of his Faculty together with a memorandum covering any requests he wishes to make in regard to appointments, promotions or increases of salary, in his Department.

When a Dean has received these forms and momoranda from the Heads of the Departments of his Faculty he makes them the subject of a report. This report, with the appropriation forms attached, is forwarded to the Secretary; that Officer also receives directly from the Heads of the *Administrative* Departments their appropriation forms and reports. In this manner all requests for appropriations are received by the Secretary and from them he prepares a statement for the Principal. To this he attaches any recommendations he may wish to make as a result of a very careful examination of the expenditures involved.

The Principal makes it his duty to examine most thoroughly all data on this subject placed

before him, and must be convinced of the necessity of an appropriation before giving it his approval. From this statement, as revised by the Principal, the Budget is drafted and submitted to the Finance Committee for approval. Should this not be given the Budget is revised accordingly and is then ready for submission to the Board of Governors for final approval.

SUPPLEMENTARY AND UNEXPENDED APPROPRIATIONS.—Everything is done to avoid the necessity of supplementary appropriations, but every year unforeseen circumstances arise which make it impossible to avoid granting a certain number of these. On the other hand there are each year unexpended appropriations which far exceed the former. There are two reasons for this; first, all unusual requisitions from Departments even though covered by appropriations are carefully examined by the Secretary and may (with the Principal's approval, if necessary) be refused. These cases while not frequent usually arise towards the end of the fiscal year when a Department Head finding that he has substantial unexpended appropriations feels that he would like to apply them to the purchase of materials or equipment for the following year. The second and main reason, however, is that generally speaking the Heads of Academic and Administrative Departments of the University practise (in these times particularly) the strictest economy and thus effect substantial savings.

CONTROL OF REVENUE

FROM INVESTMENTS.—All revenue from investments held in safe custody by the Royal Trust Company is deposited by them, every few days, in the Bank with which the University does its regular business, and statements of these deposits are sent by the Trust Company to the Bursar's Office.

All revenue expected is entered from the Investment Ledger into a columnar book under the months that it is due, and these entries are marked paid by the Cashier with the date on which the revenue is received.

The Investment Ledger and Interest Due Journal tie up with a controlling account in the General Ledger.

FROM FEES.—The fees payable by students are set out in the Announcements of the various Faculties and a recapitulation of these fees is used by the Cashiers to calculate the amount to be paid by the student.

Students on registering with the University Registrar fill out cards in duplicate, one of which is for the use of the Bursar's Office. This gives sufficient information to calculate the fee payable. The Registrar transfers these cards to the Bursar's Office. A separate receipt book for fees is kept for each Faculty and the counterfoil of these receipt books is posted to the fee card mentioned above. These postings and the calculations made by the Cashiers are checked by the Accountant and his assistants to prove the accuracy of the work done and also to make sure the proper fees have been charged. To make sure the student has entered on the fee card the courses he is actually taking, the fee cards are checked with the Registrar's records about the middle of the first half of the Session. All fee receipt counterfoils and the daily recapitulation of the same are checked by the Auditors.

CONTROL OF INVESTMENTS

STOCKS AND BONDS.—All stock certificates and bonds of the University are deposited with the Royal Trust Company for safe custody, and our guarantee that they are so deposited consists of certificates from that Company. As is shown in the following paragraphs, these certificates cover any changes that may occur in the list of securities.

The buying and selling of securities is carried out as follows:—

When the University buys a security, payment for same is made by the University's cheque in favour of the firm from whom these securities are purchased; this cheque is signed by the Secretary or Comptroller and countersigned by a member of the Finance Committee, and is forwarded to the Royal Trust Company with authority to hand it over to the seller of the securities against delivery of the securities purchased.

In selling securities a letter, similarly signed, is sent to the Royal Trust Company authorizing them to deliver the securities to be sold on receipt of the purchaser's certified cheque.

On completion of either of these two transactions, the Trust Company immediately notifies the Bursar's Office that the University's instructions have been carried out, and in cases where securities have been bought this letter is followed by a safe-custody certificate covering the deposits of the securities purchased.

REAL ESTATE MORTGAGES.—When the Finance Committee approves a mortgage loan, the University's Notary is instructed to report on the title of the property to be hypothecated and if this is satisfactory he then drafts the Deed of Loan. This is approved by the Secretary and executed on behalf of the University by a member of the Finance Committee.

AUDITORS.—At the close of the University's fiscal year, May 31, the books are audited by a local firm of Chartered Accountants. This audit includes a check on the list of investments as shown in the books of account against the Royal Trust Company's certificate. In addition to the annual audit, this firm carries on a continuous running audit.

GENERAL.—All changes in the investments of the University are recorded in the Minute Book of the Finance Committee, and the Auditors would question any investment transaction that was not approved and recorded in the Minutes of the meetings of this Committee.

In the autumn of 1932 the Finance Committee decided to make a regulation requiring that, at least once a year, the securities of the University as shown on its books should be checked by two members of the Board of Governors.

CONTROL OF ATHLETICS

ATHLETICS BOARD.—In 1923 the Undergraduates' Society suggested that the administration of athletics be taken over by a Board consisting of representatives of the University, the Graduates' Society and the students. The Governors welcomed this suggestion, inasmuch as they felt that the students were not qualified to solve all the problems incidental to athletics or to administer wisely the very considerable revenues derived therefrom. The Board, consisting of the Principal as Chairman, the Bursar, three members of the teaching staff, a representative of those graduates who guaranteed the cost of building the Percival Molson Memorial Stadium, three representatives of the Graduates' Society, the President of the Students' Council, and two other undergraduates elected by the students, was formed.

The Board is responsible for all expenditures connected with athletics and receives from the University an annual appropriation to cover the deficit on its operations. Formerly these deficits were borne by the Students' Council. There was naturally some hesitation on the part of the University to make these appropriations, but the Authorities were convinced that, in the interests of student athletics, they were justified in doing so, particularly since it was believed that eventually these deficits would become surpluses.

ATHLETICS MANAGER.—This Officer acts as Secretary to the Board and is responsible for the management of University athletics including the collection of revenue and the disbursements of the appropriations.

To Aid Women Students

The Alumnae Scholarship Committee is making a special effort to raise funds for bursaries, scholarships and loans. The difficulties of the times have affected many women students and threaten, in numerous instances, to cut short promising academic careers. The few bursaries and the small loan-fund in existence at the University are inadequate to meet the situation. Paid positions, enabling students to earn money in their spare time, are rarely obtainable at present.

Immediate contributions to the funds of the Scholarship Committee will, therefore, be greatly appreciated. Subscribers may stipulate, if they wish, the purpose to which their contributions are to be applied: *i.e.*, bursaries, scholarships, loans. Subscriptions may be sent to the Treasurer, Mrs. Gordon St. G. Sproule, 39 Thornhill Ave., Westmount, or to any member of the Committee. Mrs. George C. McDonald, 66 St. Sulpice Road, Montreal, is Chairman, and Mrs. Walter Vaughan, Royal Victoria College, Vice-Chairman.

Subscribers to May 1st, are as follows:

Anonymous	$40.00
Mrs. C. V. Christie	5.00
*Class of 1904	27.00
*Class of 1913	29.75
Mrs. Graham Drinkwater	10.00
Lady Drummond	100.00
Miss M. L. Finley	25.00
Miss Fleet	2.00
Miss Isabella Fleet	25.00
Miss E. G. Hall	5.00
Mrs. Arthur Henderson	10.00
Mrs. H. Hibbert	2.00
Miss Hickson	5.00
Mrs. Kingman	10.00
Miss Elise Kingman	5.00
Miss L. C. Lamb	100.00
Mrs. D. S. Lewis	5.00
Mrs. D. W. Lighthall	2.00
Mrs. Walter Lyman	50.00
McGill Women's Union	50.00
McGill Women Graduates' Society of Vancouver	5.00
*Mrs. G. C. McDonald	15.00
Mrs. G. McDougall	5.00
Miss Helen McEwen	30.00
Mrs. W. R. Miller	50.00
Mrs. Walter Molson	10.00
Miss Hazel Murchison	5.00
Miss Philp	5.00
Mrs. J. B. Porter	10.00
Miss Redpath	200.00
Mrs. J. R. Redpath	50.00
Dr. Helen R. Y. Reid	2.00
Mrs. Graham Ross	2.00
Miss Shephard	10.00
*Mrs. G. Abbott-Smith	1.00
Mrs. J. C. Smith	10.00
‡Mrs. F. N. Southam	50.00
Mrs. R. Starke	5.00
Mrs. Walter Vaughan	15.00
Mrs. James Walker	30.00
Col. H. M. Wallis	3.00
Mrs. Warren	3.00
Miss Laura Young	5.00

*Annual subscribers. ‡Annual for 3 years.

Dr. James Naismith, the Originator of Basketball*

By R. TAIT McKENZIE, Arts '89, Med. '92, LL.D. '21

A POWERFUL youth bestrides an unbound sheaf of wheat, and in one hand holds a sheaf he has just bound. He throws this second sheaf up in the air, stoops and binds the other before the first comes back to earth, and challenges anyone in the harvest field to do the same thing.

That is one picture I have of Jim Naismith before he went to college. A small admirer, I had been sent to the farm during the absence of my father and mother from the manse, and the old stone house, built by Naismith's grandfather, Robert Young, and afterwards owned by his uncle, P. J. Young, was to me a second home.

Jim was the hero of many boyish exploits: spearing fish on the flooded flats in spring by the light of the jack filled with pine knots; hunting the dogs that killed the sheep; riding, rowing, working, and fishing in summer, made the round of the life on the farm; with the winters spent in school at Almonte. His challenge of the wheat sheaf was characteristic of his love of competition.

When he went to McGill in 1883 he made the football team almost at once, and the gymnasium also had its lure for him, for in his second year he won the Wickstead Silver Medal, which carried the junior all-round gymnastic championship with it.

When I came to McGill in 1885, he initiated me into the mystery of the first gymnasium I had ever seen; and two years later, when I won the coveted Silver Medal myself, he was the winner of the Gold Medal, or senior all-round championship. The teacher was Frederic S. Barnjum, an English gentleman, a lover of horses and all forms of sport, and an inspiring teacher. He had come under the influence of Archibald MacLaren at Oxford, and started a gymnasium in Montreal at 19 University Street, where the student classes met three times a week. He believed in promotion for merit, and when the class lined up before the bridge ladder, over which we went in procession, our hands grasping the sides or rungs, and progressing by steps or jumps backward and forward, he was accustomed to take the meritorious student by the arm and place him high in the line. At the end of the exercises the first ten were numbered, and next class day they lined up in that order and had to fight for their place each day. The pride of making the first ten was sufficient reward for the ambitious beginner.

The exercises on the ladder were followed by a barbell drill that never varied. The strife for perfection replaced the novelty of constant change in its hold on the various students' interest, and here again promotion to the front line was the incentive. The vaulting bar, the parallel bars, the horizontal bar, and the drill in Indian clubs constituted the usual exercises of each class, and the competition was composed of these exercises and marked by three judges.

Jim and I used to linger after the class and try stunts. In that way we learned the simpler forms of tumbling, the handspring and the back and front somersault, and in the course of time we worked up a brother act, enriched from time to time by surreptitious visits to a vaudeville theatre where there was usually a good acrobatic turn on the programme. He was under man and I, being lighter, was top man. Many times he saved my neck by his steadiness. Our "turn" became a feature of the annual exhibitions, and on one great occasion when home from college we gave it during the Christmas holidays in the town hall at Almonte, as part of the programme of the high school concert. Our act ended in a Catherine wheel in which each held his partner's ankles and by a series of dives rolled across the stage like a revolving wheel. We were accustomed to make six revolutions but, unfortunately, the stage was small and we found ourselves across before we realized it and too late to stop. So we burst through the dressing-room door in the wings and collapsed in the midst of the chorus girls who were changing their dresses.

Naismith was completing his theological course at the Presbyterian College when I won the senior gymnastic championship in 1889. That summer Mr. Barnjum died, and in the fall the University asked Naismith to take charge of the classes in gymnastics. We talked it over and he accepted, with the understanding that I should help him in this unaccustomed work, which both of us undertook with some misgivings.

This was the beginning of his work in physical education, and a visit about that time of Alonzo Stagg, the hero of Yale, still further inflamed his

interest. He finished his theological course, however, and I heard him preach from a Montreal pulpit more than once.

But the call of his life's work became more and more insistent, and he soon left for Springfield, where he came under the dynamic influence of Luther Halsey Gulick, and played on the Springfield College team with Stagg, who was his classmate there. He was a great centre and at McGill had outplayed men who outweighed him by many pounds. Often I have seen him so exhausted after a game that he could hardly hold up his head, but in the game he was quick, resourceful, and could usually outwit his opponents.

These qualities showed in his college life. He was generally the leader of the raids and forages that fell upon the unsuspecting inhabitants of the "west wing" in the college dormitory, when study hours became too oppressive, and on more than one occasion he had to appear before the "powers" for explanation.

He had abundant vitality and was to me like an elder brother. Together as students we joined the Fifth Royal Scots, afterwards the Royal Highlanders of Canada, and now the Black Watch of Canada, who distinguished themselves in Flanders from 1915 on. We used to swank about in our red coats and kilts on the field days and on the evenings of the weekly march out.

On one occasion he brought me home ignominiously in a cab, after I had disgraced myself by fainting in the drill-hall after a long march, because I had started with a sprained ankle which had swollen under the strain of the march in a tightly laced boot.

There were many debates before he decided to give up the pulpit for physical education. It took courage at that time to leave the time-honoured and well-beaten path for unknown and comparatively unexplored regions, but the decision once taken he never faltered, and, I think, never regretted it. It was at Springfield that Naismith, as a teacher of psychology at the College, discussed the problems of an indoor game and formulated a set of rules which to this day constitute the basis of basketball.

I visited him once at Springfield and saw the college there for the first time. Dr. Gulick urged me to come and teach, but I could not leave my growing medical practice in Montreal.

One other visit I made to him, and that was as best man at his wedding. Having seen him safely disposed of, there seemed no reason for further worry about him on my part. Those who know him realize that he has been in good hands. In recent years we have scarcely met, but the old friendship is deep and burns as brightly as it did in the days when we were students together at McGill.

*This article has also been contributed to *The Journal of Health and Physical Education*.

McGill's Contribution to the West Indies

By HENRY J. KEITH, M.A., D.D.

IN writing of McGill's contribution to Bermuda and the West Indies, one faces several difficulties. In two months, Mrs. Keith and I visited fourteen of the islands and spent but a day or two in each. It is impossible, with such brief time as that at one's disposal, to obtain anything approaching complete knowledge of the great service rendered by McGill graduates in the life and progress of the British West Indies, particularly as the graduates are scattered, seldom see each other, and cannot always give details of one another's activities.

The Graduates' Society of McGill made our task much lighter than it would have been otherwise. Before we left Canada, we were furnished with a list, more or less correct, of graduates living in the West Indies. These were graduates in Science, Medicine, Arts and Agriculture. Letters were sent to many, advising them of our coming, and this enabled us to meet a number of them, which proved of immense satisfaction to us. We were welcomed most cordially, as if we had brought a little bit of home to them. Many at considerable inconvenience to themselves came to call on us, and others sent regrets. All expressed gratitude that their Alma Mater had sent greetings. We concluded, after our visit, that the Graduates' Society could continue to do an excellent piece of service, even if it received no tangible financial return, if it but kept in touch by letter with these scattered sons and daughters of McGill, filling important posts in various parts of the West Indies.

We carried with us a generous supply of booklets, and calendars, and historical and war

records of McGill, kindly provided by Lt.-Col. Bovey. The volume on The History of McGill, of which we had a number of copies, we reserved for heads of educational institutions and leaders in the various governments. We are sure that McGill's name in print is now known in most sections of the islands we visited, adding to the enviable record made by the McGill graduates who have lived there. Not a few serious enquiries were made as to courses, expenses, and standards of admission. We felt we should have been more closely in touch with all of the Faculties, in order to have replied in a really satisfactory manner to many of the questions asked.

Bermuda is perhaps the only one of the Islands in which a branch Graduates' Society is feasible. The group of McGill men there is sufficiently varied in professions and large enough to profit by one. The graduates themselves expressed a desire for a Society, and we hoped that the tea given in our honor by Dr. and Mrs. Airlie Ogilvie Arton, Med. '08, would be the initial meeting of such an organization. In the other islands, with the exception of Barbados, McGill graduates are few in number and scattered. McGill has a great record for service in Barbados. Of about forty Doctors of Medicine some eighteen are McGill men. These however live in twelve parishes, and they have now a British Medical Society, the President and Secretary of which, at the time of our visit, were McGill men. Dr. Clarence A. Yearwood, Med. '93, has recently retired. We met a few of the others—Dr. Aubrey G. Bancroft, '11, Dr. Ernest B. Carter, '18, Dr. Norman Drayton Parris, '03, whose son Keith, B.S.A. '30, distinguished himself in the Macdonald Agricultural College.

In Antigua, Francis Henry Warrenford, B.A. '15, is Superintendent of Agriculture. He is carrying out a most interesting social settlement scheme, in conjunction with his experimental station, where sugar canes and various tropical roots and fruits are tested. In Dominica, Dr. Charles Griffin, '22, is the Medical Health Officer. He is held in high esteem and regarded as most efficient, in a region where public health is all important. We were interested in meeting Thomas Reynolds Theobalds, Sc. '28, now on the Engineering Staff of St. Lucia. He retains kindly memories of Montreal homes and McGill. He is making a place for himself in an island in which opportunities for university graduates must be very limited. Dr. John Briston, '21, sent his regrets to our ship and a good substitute to convey his greetings. V. Archer, B.S.A. Macdonald College, we were informed, had returned to McGill for his M.Sc.

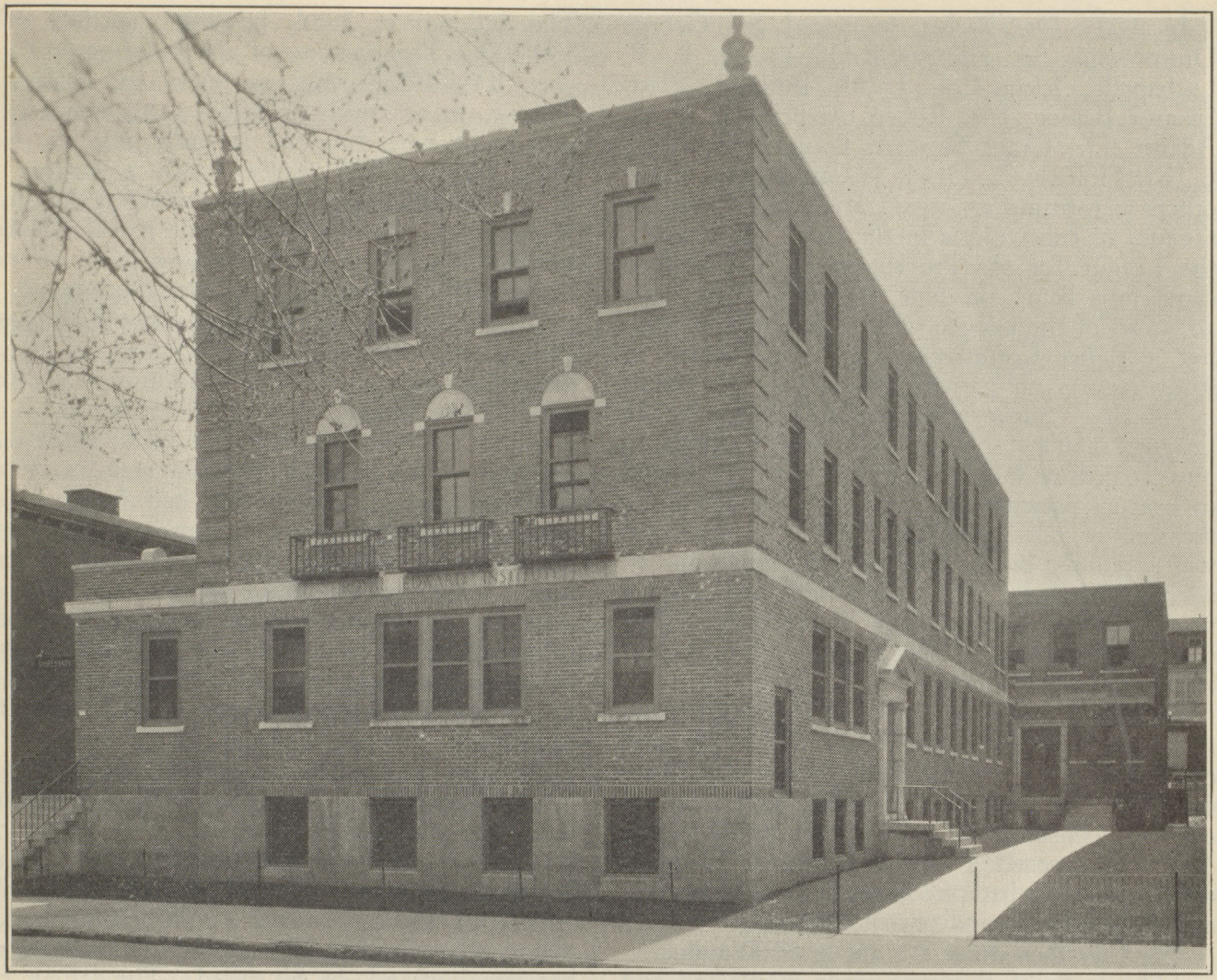
We had in our list of graduates in Trinidad, the name of John Sydney Dash, B.S.A. '13, but on enquiry we learned he had been promoted to another important post, Director of Agriculture in British Guiana. We met him in Georgetown and saw something of the wonderful Botanical Gardens under his supervision. Some 86 varieties of palms flourish there, shading beneath their branches marvellous specimens of the Lotus Lily and the Victoria Regia. Professor Dash also directs all the agricultural experiments at his station and in addition supervises a very attractive settlement and colonization scheme which the Government is fostering in Essequibo. In Jamaica we met Dr. George H. Robertson, M.D. '22, and Dr. James S. Myers, M.D. '14. Dr. Myers is Senior Medical Officer in an asylum containing 1,800 patients. As a hobby he operates a very extensive stock ranch and he is keenly interested in Canadian cattle.

In one sense, the outlook for education is hopeful in the British West Indies. Primary schools supported by the State, or church, are found in every district in all of the islands. They are not always well equipped, are frequently overcrowded, and the teachers work against great handicaps, but their methods and ingenuity won our admiration. Secondary schools are supported either by the State or some one of the various missionary societies with headquarters largely in the British Isles. Canada is represented in Trinidad, British Guiana and Grenada. But the system of education is largely that of the Old Country schools. Matriculation examinations for London University are held in various centres. Rhodes Scholarships and several Empire Scholarships are available and it is the usual practice to select one of the universities in England or Scotland for higher education. Two colleges in the Islands interested us immensely. One of these is Codrington College, Barbados—small in numbers of students, with a situation rivalling for scenery any other

(Continued on Page 20)

SUPT. OF KING EDWARD HOSPITAL

Dr. E. Millard Astwood, who graduated in Arts in 1927 and in Medicine in 1931 and who thereafter served two years as an interne in the Montreal General Hospital, has been appointed and has assumed duties as Superintendent of King Edward Hospital, Hamilton, Bermuda. Previous to graduating in medicine, he was elected President of the Students' Council of the University and held this office throughout his final year.



THE ROYAL EDWARD INSTITUTE, MONTREAL

This photograph, taken specially for *The McGill News*, shows the Institute's new building on St. Urbain Street. To the rear, at the right, is the entrance to the Jeffrey Burland School for tuberculous children.

The Royal Edward Institute, Affiliated with McGill University

By E. S. HARDING, B.A., MED. '97

(Secretary of the Institute)

IT has been the policy of the City of Montreal to encourage the establishment and maintenance of charitable institutions by philanthropic organizations. This has given almost unbounded opportunity to individuals to lay foundations which have developed into large institutions. Thus the Royal Edward Institute, which has recently become affiliated with McGill University, is the outcome of the philanthropy and vision of the late Lieut.-Col. J. H. Burland. We must, however, give to the late Dr. A. J. Richer credit for initiating the movement, which led to the Institute's development. Dr. Richer was a pioneer in the work against tuberculosis in this Province and through his efforts the first sanatorium was built at St. Agathe; unfortunately, this was burned after a few years of usefulness. He then turned his attention to establishing a preventorium and Brehmer Rest, also at St. Agathe, has ever since been carrying out his practical idea that prevention is better than cure.

In 1903 Dr. Richer interested Sir George Drummond, Sir Thomas Roddick, Dr. E. P. Lachapelle, Lieut.-Col. J. H. Burland, Hon. Senator Beique, Mr. Robert Archer, Dr. J. G. Adami, Dr. Grant Stewart, C. J. Fleet, K.C., C. M. Holt, K.C., Dr. J. J. Guerin, and many others in forming an organization to combat the ravages of tuberculosis in the city. As a result, the League for the Prevention of Tuberculosis came into being on June 1, 1903. The early activities of the League were mostly educational, but a Relief Committee was soon formed to study reports on patients referred by physicians in the city. Supervision was undertaken by the League, sanitary sputum cups were supplied to prevent bedside infection, leaflets were distributed to instruct patients and their families, and some measure of relief was provided. An Inspector was appointed by the City to visit homes and to disinfect houses. The Committee met once a week and discussed each case as presented. This was the beginning of special work among tuberculous cases in Montreal.

On July 1, 1904, the office of the League was moved to a room in the House of Refuge; and on November 7 of the same year a dispensary or clinic was opened to examine and treat all cases of consumption among the poor. New York had opened a similar clinic in October; only two others had previously been established—one in Edinburgh and one in Germany.

The City then made a grant of $700 annually, and the most of this was spent in placing and paying for advanced homeless patients in the Home for Incurables. There were thirty beds available and the rate was $10 a month per patient. Statistics of the work in those early days are very interesting in comparison with our work to-day. May I cite one example: 44% of patients then made no attempt to destroy their sputum and 23% of advanced cases were sleeping with other members of the family.

In 1907 the Grace Dart Home Hospital was founded. In 1908 the first visiting nurse was appointed and was supplied by the Victorian Order of Nurses. In the same year the Laurentian Sanatorium Company was organized. It was at this time that the late Lieut.-Col. J. H. Burland realized the importance of this work and visualized its growth. He bought a property at 47 Belmont Park, remodelled the building, and fully equipped it. He then presented it to the League as a gift from his sisters, Mrs. H. M. Ami and Mrs. Cathagne, and from himself. His only stipulation was that an endowment fund of $50,000 be raised for maintenance and the name be changed to the Royal Edward Institute. The endowment fund, however, reached only $30,000. The opening of the building on October 11, 1909, was an event of historical interest, in as much as direct cable connection was made with England in order that the late King Edward VII might touch a button in Willesden Park, where he was staying at the time. When he did so, the doors of the Royal Edward Institute opened, the flag slowly rose to the top of the staff, and the building was illuminated.

The new and commodious quarters in Belmont Park greatly accelerated the work and the clinics jumped to large proportions. Additional visiting nurses were secured and the City increased its grant to $3,000. The first Provincial grant was received in 1912. Col. Burland next made an offer to build a seventy-five bed hospital for advanced cases of tuberculosis, provided the City of Montreal and the Provincial Government would each pay one-third of the maintenance cost—the remaining third to be raised by public subscriptions. Through short-sighted policy, this offer was not accepted and the campaign against tuberculosis in Montreal was delayed from 15 to 20 years.

An open-air school was established at the Royal Edward Institute in December, 1912, to educate and treat tuberculous children. This began on the galleries, but was later transferred to a small building on the rear of the property. In 1926 Mrs. J. H. Burland erected a commodious building to accommodate fifty children in memory of her late husband, to be called "The Jeffrey H. Burland School". This building was equipped by Mrs. H. M. Ami.

In 1930 the property in Belmont Park was expropriated by the Canadian National Railways and, after a year in temporary quarters, the Institute's present buildings on St. Urbain Street were erected.

There have been only five Presidents of the Royal Edward Institute, but their names are so well known in the city that comment upon them is unnecessary and the present organization attests to their presiding genius: Sir George Drummond, Lieut.-Col. J. H. Burland, Dr. J. G. Adami, Col. David Law, and Louis S. Colwell—the last named having guided the affairs of the Institute since 1924. In addition to the President, the officers of the Institute at the present time are: Vice-Presidents, Mrs. J. H. Burland and Howard Murray, Esq., O.B.E., Treasurer, the Hon. Gordon Scott, and Secretary, Dr. E. S. Harding.

The top floor of the new building is divided into four wards, which contain twenty-two beds, devoted almost exclusively to observation cases and cases of induced pneumothorax.

The second floor contains the offices, the common-room of the visiting nurses, office nurses, the social service office, the x-ray and quartz light departments, the laboratory and the board-room.

The ground floor contains the patients' waiting-room, the consulting rooms, examining rooms, nose and throat department, and the dispensary.

Behind the main building is the Jeffrey H. Burland Open-Air School and the small playground for the children.

The present activities of the Royal Edward Institute are:

1—*Clinics for the examination of patients.*—These are held each week day at 10 a.m. In addition to these main clinics, there is an evening clinic, and there are three clinics a week at Branch A, situated at 3974 Notre Dame St. West, two clinics a week at Branch B, situated at 5524 4th Ave., Rosemount, clinic for the examination of contact children on Saturday morning, and the nose and throat clinic held three times a week.

2—*Visiting Nurses*—The Staff now consists of two supervisors and ten visiting nurses.

3—*Social Service*—the problem of tuberculosis to-day in a large city is mainly one of social conditions.

4—*Hospital Beds*—These are maintained in connection with the clinics for the bed-side observation of patients and for the beginning of artificial pneumothorax treatment in suitable cases. The wards are under the care of four nurses and necessarily include a culinary department and domestic service.

5—*Open-Air School* — Matriculation requirements are tuberculous infection in the lungs in a child of school age. While receiving treatment, they carry on their regular school work and also receive some useful domestic training.

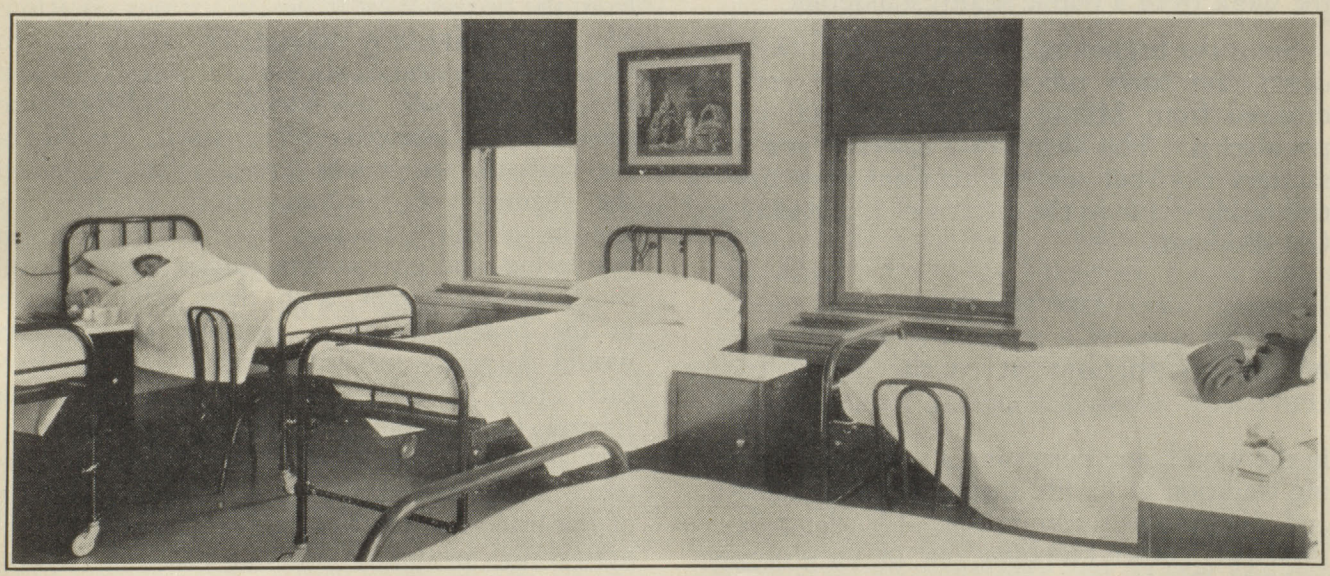
6—*Summer Camp*—The children of the Open-Air School have a summer home in St. Agathe, known as the Greenfield Memorial Camp; here are acquired the finishing touches to their curriculum of health, while enjoying a summer outing earned by their hours of study in winter with the windows wide open.

7—*X-Ray and Quartz Light Department*—Roentgen pictures of the chest are necessary, not only in diagnosis, but in following the course of treatment of each case and especially in pneumothorax work. Quartz lamp treatment is indicated in various pre-tubercular conditions, forms of skin tuberculosis, and gastro-intestinal involvement.

8—*Laboratory work*—Examination of sputum is an essential in the work, while blood and other laboratory tests materially aid in diagnosis and treatment.

9—*Office and Filing Department*—As the work of an institution grows, the office correspondingly increases and must be maintained.

10—*Teaching*—Since the Institute has become affiliated with McGill University, the main clinics have been thrown open to students, who attend six days a week and receive



A WARD IN THE NEW ROYAL EDWARD INSTITUTE

Beds in the new Institute are maintained for observation of patients and for the beginning of artificial pneumothorax, where treatment of this nature is indicated.

practical instruction in the various phases of that important branch of medicine, tuberculosis.

Affiliation with McGill has not only brought the Institute into touch with the teaching activities of the University, but has established closer relations with the Royal Victoria Hospital, the Montreal General Hospital, and the Children's Memorial Hospital, as well as a closer co-relation of the staffs and the various clinics of these institutions. Necessarily, the nature of our work throws us in constant touch with the Laurentian Sanatorium, the Grace Dart Home Hospital, the Sacred Heart Hospital, the Department of Health of the City, and the Department of Hygiene of the Province. A close co-ordination of all the allied forces is very necessary to carry out a successful campaign against tuberculosis.

A word as to the finances of the Royal Edward Institute. We receive a grant of approximately $10,000 both from the City of Montreal and the Province of Quebec. The practical interest of Col. Burland, not only during his lifetime, but by a generous bequest in his will, has established an endowment, which yields another $10,000 a year. Other donations and bequests have helped us to finance the work, but, as in the case of all Montreal charitable institutions, it is necessary to call on a generous public for whole-hearted support. This has never failed; and we feel deeply grateful to all who have supported and encouraged us in our efforts against tuberculosis. That the City and the Provincial Governments are contributing this sum to carry on our work is the greatest indication of the importance of the work from a public health standpoint.

Since the beginning of the work in 1903, the death rate from tuberculosis in Montreal has dropped from 210 to 100 per 100,000 of the population. This indicates a healthier and more sanitary city, but we like to think that part of this result is due to the dreams of Dr. Richer and Col. Burland.

McGill's Contribution to the West Indies

(Continued from Page 16)

in the world, and possessing a wealth of fascinating tradition in its life that stirs the imagination and inspires one's admiration. Dr. Whipple, its Principal, Father Hopkins, one of its professors, and Mr. Dunlop, its registrar, were most gracious in their reception of our brief visit. The other college is The Imperial College of Tropical Agriculture, in Trinidad. The Colonial Office plans that it shall have a far-reaching effect on the products of the British West Indies in years to come. It is already of such importance that in the 10 years of its history it has drawn to itself graduate students from every part of the world. But as a whole the educational tradition is that of the Homeland—meaning the British Isles.

There is in the West Indian Islands a very limited field for highly trained men and women. The majority of students from them must of necessity seek other lands to conquer. McGill has played no small part in turning the eyes and hearts of such young people of the British West Indies to Canada and to things Canadian in the realms of business, trade, government, and higher education. She must keep in closer touch if possible with her graduates in these Islands, because of what that contact means to them. But she has also the wider duty of an Imperial institution, always willing to render services to the Empire. A definite field for such service lies close at hand in the British West Indies. The United States is just off their shores, with all that this implies in strong influences. McGill should assist in binding them more closely to Canada, their nearest sister Dominion in the Empire. There may never be a political relationship, but even without such, there are grounds for a union much more clearly defined than that which now exists.

The suggestions that occur to me that McGill might adopt for strengthening these bonds of Empire, may seem trivial compared with those that others could suggest. Apprenticeship courses for one thing might be provided for students from the British West Indies, in various vocations. McGill scholarships should be available, for which all the islands should compete. A closer relationship, such as McGill could construct through her Extension Department, would, on the basis of her present strong influence, widen the channels of communication, whereby the benefits of our Canadian systems of education, marketing, and government might be shared to a much greater extent with these fellow-citizens in the British Empire. Influence of this type would do much towards uniting the Islands to each other, in government, business and social spheres, in addition to an educational union, and such broader unity is vital to their progress today. Even now there is a yearning on the part of the leaders of the British West Indies for these very things in our Dominion, and this yearning the McGill Graduates' Society and friends of the University should seek to cultivate, and bring to fruition.

ANNUAL MEETING OF THE ALUMNAE SOCIETY

A successful year was reported by the McGill Alumnae Society at its annual meeting in the Royal Victoria College, on May 26. Membership stood at 235, and twelve general meetings were held. Receipts totalled $1,185.57, and a small deficit, incurred by the year's activities, was absorbed by the general reserve of the Society, leaving a balance of $189.34 in the bank. Among the principal disbursements were contributions of $242 to the Scholarship Fund of the Canadian Federation of University Women, and of $100 to the library at the Military Hospital, Ste. Anne de Bellevue.

Emphasis was laid upon the efforts of the Scholarship Committee to raise funds for the assistance of women students at McGill. It was explained that the proceeds of entertainments held during the year had been devoted to the Federation Scholarship only, and that the Committee was raising funds solely by subscription. Appreciation of the efforts of Miss Jane Fleet in canvassing personally members of the McGill Women's Union was expressed, and the response was felt to be generous indeed. Subscriptions to date totalled over $1,200, divided as follows: Endowment Fund, $136.50 ; Loan Fund, $251.32; Bursary Fund, $853.65. Hope was expressed that the response from graduates reached by *The McGill News* would be generous, as many emergency calls are anticipated for the coming season.

The report of the Library Committee stated that 8,974 books had been given out during the year at the St. Anne Hospital, and that there were now on the shelves 6,093 books, of which 349 were French. A shortage of illustrated magazines was experienced during the winter. Through the kindness of the Red Cross Society, the Library was kept supplied with jig-saw puzzles, which were greatly appreciated by the patients.

Brief reports were received from the other committees of the Society, all of which functioned actively during the year.

The following officers were elected for the coming season: Hon. Pres., Miss Adeline Van Horne; Past Pres., Mrs. Gordon Sproule; President, Miss Louisa Fair; Vice-Presidents, Mrs. A. F. Byers, Dr. Jessie Boyd Scriver, Mrs. John Rhind, Miss Jean Kyle; Recording Secretary, Miss Isabel Rowat, and Assistant, Miss Marjorie Lynch; Corresponding Secretary, Miss Marjorie Mitchell, and Assistant, Mrs. E. T. Bourke; Treasurer, Mrs. J. J. Harold, Assistant, Mrs. James Brierley; Tea Convener, Mrs. C. R. Alexander; Convener of Editorial Committee *McGill News*, Miss Helen Hague; Convener of Library Committee, Miss Ruth Murray; Representatives to the Local Council of Women, Miss Mary Creber and Mrs. Gerald Charters; representative to the Board of the University Settlement, Miss Joan Marsters.

"DADDY LONG LEGS"

Among the courses of study given by the Department of English, Course number 13 on the technique of the drama and Course number 22, an advanced course in the same subject, have proved popular in the last few years, and valuable in the interest which has been aroused in the drama and play production. Each session undergraduates in these courses have staged two or three plays, under the direction of the Department. These have been well produced, and have given pleasure to other undergraduates, members of the staff, and those graduates who have seen them. In consequence, as the years have gone by, a group of graduates has developed whose interest in the drama is keen.

During the past session, this group decided to continue their work, and as a result the play "Daddy Long Legs" was presented in Convocation week, on Monday evening, May 22nd. The graduates required some organization to sponsor the production of their play, and the Montreal Branch of the Graduates' Society undertook this role.

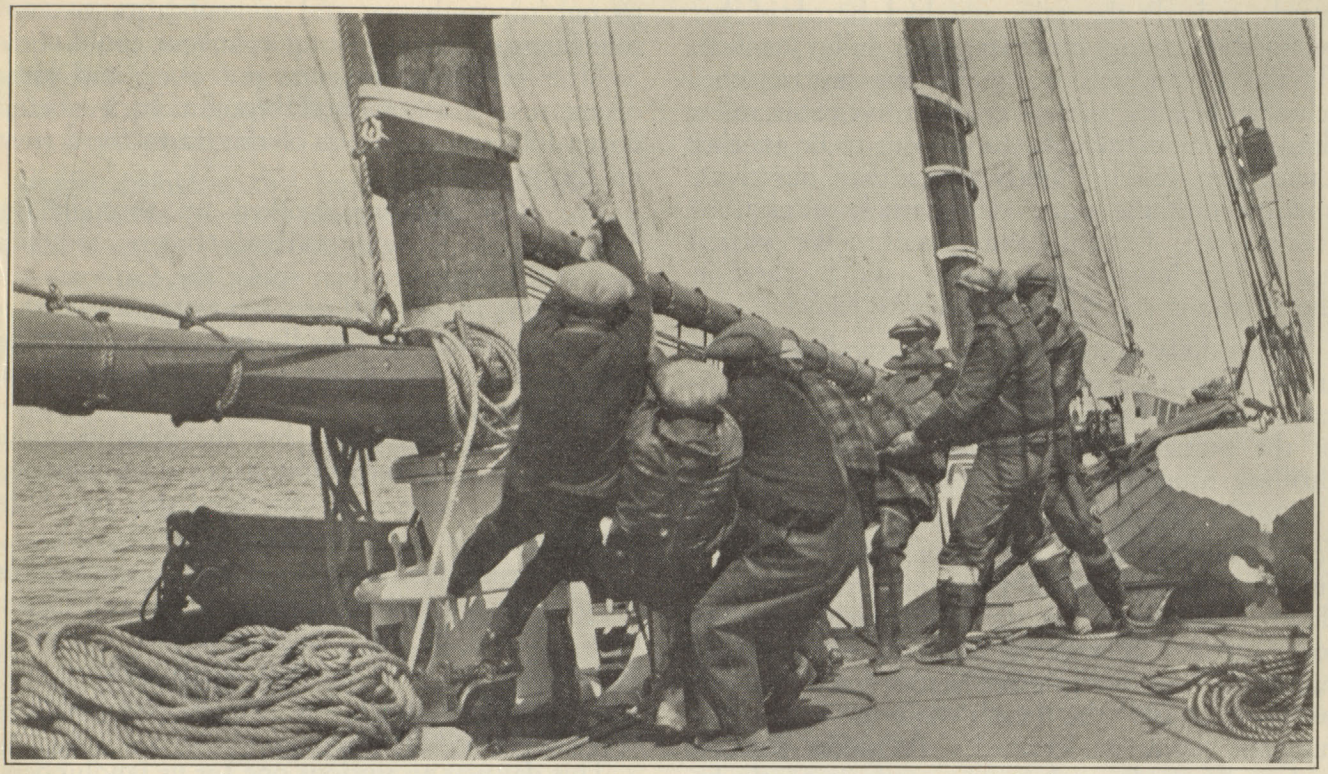
The play, "Daddy Long Legs" was chosen as appropriate to graduation week for it contains a scene laid in a college dormitory. It has an easy appeal to its audience, as it proceeds along simple lines, avoiding the complex, the psychological and the elaborate, but containing a measure of genuine sentiment. The stage direction was excellent and the cast was well up to the standard which has been established by these graduates. The cast included: Nora Sullivan (Mrs. A. K. Glassford), Melbourne Doig, Reta Macdonald, Katherine Hingston, Grace Gillson, Gladys Eaves, Katherine McCaffrey, Eileen Fairbairn, Wenonah Beswick, Catherine Black, Wilfred Werry, James Diplock, Thelma Mitchell, Esther England, Antony Chapman, Mae Murray, and Maxwell Ford.

By taking a part in the functions of Convocation week the Montreal Branch Society is endeavouring to bring the graduates into intimate touch with the University and its new graduates; and it hopes to develop a deeper interest between the new and older members of the graduate body.



A PHOTOGRAPH BY W. R. MACASKILL

BLUENOSE



ON THE RUN FROM HALIFAX TO QUEBEC

A scene on the deck of the "Bluenose" as she sailed up the Gulf of the St. Lawrence in May.

Up the St. Lawrence in the "Bluenose"

By W. DURIE McLENNAN, Sci. '14

WHEN an opportunity presented itself early in May of sailing from Halifax to Quebec in the *Bluenose*, Philip Burnett, Med. '00, Alan Turnbull, Sci. '13, and I promptly decided to make the trip.

The *Bluenose*, designed by W. J. Roué, of Halifax, was built in 1921 by Smith & Rhuland at Lunenburg, and, after a successful career of both fishing and racing under the command of Capt. Angus Walters, was on her way to be exhibited at the Chicago World's Fair.

Her dimensions are: Length over all 143 feet; length water-line 112 feet; beam 27 feet; draught 15 feet 10 inches; main boom 81 feet; height of main topmast from deck 125 feet. Unlike most of the modern bankers, *Bluenose* has no power in her, and we were, therefore, uncertain as to the length in time of the trip ahead of us.

We got away from Halifax on the afternoon of May 5 and ran down the harbour before a fresh north-west breeze, carrying four lowers. Off the outer automatic buoy at the mouth of the harbour, the log was set and the course laid up the coast. This was at 5.15 p.m., and all hands repaired to the forecastle for the first of many hearty meals, prepared by that most important person aboard a fisherman, the cook, by name Bill Dauphinee, but popularly known as Chalker.

None of us will forget the way *Bluenose* ate up the miles that night; with a heavy offshore wind, smooth sea, and sheets started, she raced off ninety-one and one-half nautical miles in seven hours, an average of thirteen knots. As it was breezing up all the time, Captain Walters decided to ease her and took in main sail and jib, a hard hour and a half's job in the dark.

Daylight saw us off Cranberry Island, at the entrance of Chedabucto Bay, facing a dead beat of about thirty miles up to the Strait of Canso.

At 5.30 a.m. the trysail, or riding sail as the fisherman call it, was set, and soon after the jib, but this had to be taken in again after a few minutes as the wind freshened still more with the rising sun. We now had an opportunity of seeing *Bluenose* show how she can beat to wind-

ward, and all the tales we had heard of her wonderful sailing qualities were fully justified. As the trysail was being set, we saw another schooner beating up the bay about five or six miles dead to windward. She turned out to be another Lunenburg vessel, slightly larger than ourselves, and carrying the same sail, namely jumbo, or fore-staysail, foresail, and trysail. We passed her in four hours and a quarter, and by three in the afternoon she was hull-down to leeward.

As we beat up the bay the sea moderated, the trysail was taken in, and with the jib and mainsail set she worked her way into the narrow waters of the Strait, where we had one of the most thrilling moments of the trip.

With a strong northerly wind of nearly gale force blowing down the Strait, like through a funnel, a particularly hard gust hove the *Bluenose* down nearly as far as she has ever been in her long career. It was an exciting moment, lee rail under two feet of green water, main halyards overboard, and the beach only a scant two hundred yards to leeward. A quick decision had to be made, and it was made instantly by Captain Walters. To bring the vessel about was too dangerous, as if she had missed stays she would have been on the beach. He therefore let her pay off, and jibed her, at the same time lowering the mainsail on the run, the trailing halyards being hauled aboard again as fast as possible. Emergencies such as this arise quickly at sea, and have to be dealt with instantly, but when they are over they are soon forgotten, and after we had run back a few miles and anchored in a cove on the Cape Breton shore, we sat down to our supper, happy and content after twenty-four hours of as fine sailing as anyone could wish.

After supper a dory was put over, and some of us rowed ashore and brought back several dozen lobsters, right out of the traps, for a treat on the morrow.

The next day we worked up through the Strait against a light northerly breeze, and out into the Gulf where we spoke the Government ice-breaker, *H. B. McLean*, who gave us weather and ice reports. A friendly rum-chaser gave us a tow as far as East Point, P.E.I. when the breeze died out.

That night was calm, but the next morning found us bucking into short heavy seas, whipped along by the same northerly wind that had been blowing for the last four days.

There may be drearier parts of Canada, but the glimpse we had of Amherst Island and Deadman's Island of the Magdalens that morning, as we beat our way up past them under trysail again, made us glad that we did not have to spend our lives there.

This day was an anxious one for us landlubbers, as eating in the forecastle, with the vessel jumping into the seas as she was, was no mean feat of balancing oneself and one's plate, let alone one's internal economy. However, let it be recorded to the everlasting glory of Old McGill that her three sons aboard the *Bluenose* did full justice to Chalker's cooking, and wasted none of it.

These days were the best part of the trip as far as sailing was concerned, the succeeding ones bringing a series of light varying breezes interspersed by calms. We made the Gaspé Coast at



OFF CANSO UNDER TRYSAIL, MAY 6, 1933.

All the tales of "Bluenose's" sailing qualities were justified by her performance on this day. On the previous day and night, she had run off 91½ nautical miles in 7 hours, an average of just over 13 knots.

Bonaventure Island on the morning of May 9, worked our way slowly along to Father Point, which we reached at sunset on the 12th. That night we picked up the Government steamer, *Mar Dep*, which towed us to Quebec.

Before bringing this narrative to a close, I should like to mention some of the crew. First of all, Captain Angus Walters, small of stature, but big in every other way, a driver of men, including himself, and with a keen and kindly sense of humour; he made the days aboard his vessel some of the most enjoyable we have ever experienced. He has an extraordinary genius in handling his ship—even landsmen like ourselves could notice the difference in the feel of the vessel when he was at the wheel, and this is said with all due deference to the other members of the crew, who are experienced sailormen.

The mate, Captain Harris Himmelman, who has been at sea since he was a boy of twelve, first of all fishing, and latterly in command of motor vessels engaged in trade out of St. Pierre-Miquelon—a dangerous trade full of adventures.

Captain Carl Kohler, born in a square-rigger off the Chilean coast, of German parents, except for eight years at school in Germany, has lived at sea, mostly in British ships. During the war his ship, bound from Lunenburg for Brazil with a cargo of fish, was captured by the famous Von Luckner, and he and his wife and crew taken prisoner aboard the *Seeadler*.

Captain Roland Knickle, also of the crew, was skipper of the *Andrava*, only vessel which survived the gale in which five Lunenburg vessels were lost on Sable Island in 1927.

Apart from the pleasure of being aboard the *Bluenose* and watching her work in various kinds of weather, it was a wonderful experience to hear these men and the others of her crew tell about their lives at sea in pursuit of the humble cod, of long hours of work, hardships, and danger, of which the landsman has no conception, and which is taken by them as part of the day's work. To these, the best real seamen of today, we wish good luck.

The Huntington Library, San Marino, California

By M. DOROTHY MAWDSLEY, R.V.C. '20

SINCE 1920, the adage 'Go west, young man' has acquired a new significance in literary circles, for in that year the Henry E. Huntington Library was opened to the public. The full importance of the Huntington Library, however, is only gradually being understood. Slowly, scholars are beginning to recognize that if a book is not in the British Museum or the Bodleian, it is probably in the Huntington. The *Short Title Catalogue* compiled by A. W. Pollard and G. R. Redgrave "of books printed in England, Scotland, and Ireland, and of English books printed abroad" between the years 1475 and 1640 records 26,143 titles. Of these, the Huntington Library possesses 40%, being surpassed only by the British Museum with 70% and the Bodleian with 45%. It possesses, moreover, 700 editions of which no duplicate exists elsewhere.

The British Museum and the Bodleian are public institutions which have existed throughout a long series of years, acquiring their wealth of literature gradually, with few spectacular additions. Scholars, their minds attuned to the permanent and the historical, understand that type of development. But now, suddenly, in a new province of a new country springs up—over night, as it were—a collection worthy to rank alongside these, and the scholar gasps and finds it difficult to accept the spectacular reality. That is why the wealth of the Huntington is not yet fully appreciated.

One of the most interesting developments of democracy as manifested in the United States—at least until the present depression—has been the rise of the benevolent millionaire. Whatever was the intention of the men who framed the alluring code that all men are created equal, the actual conduct of business in the States has fostered the concentration of enormous wealth in a few hands. Had the rewards of business been scattered with a more democratic hand over the multitude, they would have been consumed in living during the lifetimes of those who received them. There would have been more

chesterfield suites, perhaps, but the world would have lost the public libraries and the universities which now represent the interesting by-products of iron, of oil, or of railways.

It is with some such thought as this that one contemplates the amazing result of the avocations of Henry E. Huntington. As a shrewd business man, he built up an enormous fortune. He had the discernment to see that the inevitable growth of California would imply the need of transportation. At first, he shared in the management of the Southern Pacific Railway, which was controlled by his uncle, Collis P. Huntington. Later, he moved from San Francisco to Los Angeles and interested himself in the development of electric railways in that city.

As a boy, Henry E. Huntington had shown no desire for a college education; even after the acquisition of a fortune, he showed no interest in European travel, being perfectly satisfied with the magnificent estate he had purchased in 1902 at San Marino, a suburb of Los Angeles. It is curious, therefore, that he should have decided to expend the surplus of his enormous fortune as he did.

Of course, the creation of a library such as the Huntington would have been impossible without exceptional opportunities. It so happened that a number of important private libraries were put up for sale during the years in which Henry E. Huntington was in the market. It is doubtful whether such an opportunity could occur again. Not enough books remain in private hands to make such a collection as the Huntington possible, and the books in institutions such as the Huntington will never again be offered for sale.

But it was more than exceptional opportunities —it was also exceptional methods which made possible the phenomenal development of the Huntington Library. Its founder applied the methods which had been successful in the business world to the acquisition of a library. Up to that time, libraries had not been so acquired. Huntington's entrance to the book-collecting world was of the nature of a bomb-shell, and during the seventeen years in which he was in the market for rare books he upset all the previous traditions of the trade. He cared nothing for criticism; he knew what he wanted; and he was able to outbid any rival. Naturally he caused an immediate rise in book prices. He was aware of this, but indifferent to it. If a book was worth having, he was prepared to pay what was demanded in order to get it. Applying the methods of big business, he again and again purchased entire libraries, turning them over to his assistants who worked through his acquisitions checking off duplicates. Quantity was not his interest, and duplicates when ascertained were sold and the money so gained used for further purchases. Naturally, under such methods, the collection increased so rapidly that the examination of the purchases could not keep pace with their acquisition. It will be years before the officials at the Huntington Library will have finished recording what it contains.

In 1910, Henry E. Huntington announced his intention to retire from business. He was then only fifty years old, and intimate friends were sceptical of his ability to alienate himself from his old interests. In 1911, however, the turn which his interests were to take was spectacularly announced. In that year, he purchased the entire library of E. Dwight Church for $1,000,000, and two weeks later became the possessor of the famous 'Gutenberg' Bible at the sale of the books of Robert Hoe. This coveted volume, which had been purchased in 1897 for £5,000, he acquired after brisk bidding for the record price of $50,000. From that day Huntington was a force to be reckoned with in the book world. The Huntington Library Bulletin (May, 1931) attempting to indicate the chief sources of the library's wealth, records over a hundred collections which were purchased in their entirety. Besides this he often carried off the lion's share at other sales, or made individual purchases of the greatest significance. The number and extent of these has not as yet been recorded.

It is impossible in so brief an article to do more than hint at the library which resulted.

Of the manuscripts, perhaps the most interesting is the famous Ellesmere Chaucer which came into the Huntington Library through the purchase in 1917 of the Bridgewater Library, founded by Sir Thomas Egerton, Baron Ellesmere and Viscount Brackley, who was Lord High Chancellor to James I. This, undoubtedly the most beautiful manuscript of the Canterbury Tales, is famous for the equestrian portrait of Chaucer which appears in the margin beside his *Tale of Melibee*. Besides this, however, there is an untold wealth of manuscripts, including the Hastings-Huntingdon and Battle Abbey papers. These are being systematically examined, and are already drawing scholars from the old world anxious to peruse them.

As well as its yet uncharted wealth of manuscripts, the Huntington is rich in incunabula. The library possesses about 5,400 books printed before A.D. 1500. This collection, the largest in America, represents 705 different presses in

153 different cities, thus giving a rounded view of the art of printing while yet in its swaddling-bands.

The wealth of the section dealing with books from 1500 to 1640 has already been indicated. The Shakespeare collection is especially rich, the quartos being practically unrivalled. Besides this, the library possesses a great wealth of Americana—55,000 volumes—and a collection of first editions and holograph manuscripts down to the present—in fact, as Mr. Schad remarks in the *Huntington Library Bulletin* for May, 1931, "an even sequence of first editions of English Literature from Chaucer to Conrad."

It is perhaps only the scholar and the pedant who mourns at the magnetic power possessed by gold. Documents intimately connected with the history of the old world have been drawn by the power of money to the new, where it will cost the scholars of the old world dear to follow them. Let us rejoice that it has at least brought nearer to us records of our common background, and placed them where they will receive expert care and be made available for study.

Many of the treasures now permanently installed at the Huntington were formerly housed in the libraries of titled English families, where they were difficult of access, and were often suffered to deteriorate from neglect.

In contrast to this, the Huntington collections were made available to students even before Henry E. Huntington's death, and they are receiving expert care. The rooms which house the collections are everywhere illuminated by artificial light and protected from the destructive rays of the sun. In the stacks which contain the rare books, air is kept continually circulating and the books are systematically "exercised," that is "leafed over" in order that they may have the human contact which books require. It must not be forgotten, however, that the books since they are literally irreplaceable cannot be exposed to any danger of destruction from over-use. Gradually, photostatic reproductions are being made of all the rare books and, unless the original is essential to the student, he is presented with the reproduction where it exists.

Naturally books of such value cannot be consulted at random by the casual visitor. Readers must be accredited to the library before being admitted to the reading-rooms. Once they are admitted, however, the courtesy of the staff knows no limits. Everything that can be done to aid the student or give him comfort appears as soon as the need is indicated—indeed often before. To study at the Huntington is to study in a student's paradise.

A little distance from the library is the magnificent Renaissance structure built in 1910 as the Huntington residence and now used as an art gallery. Here are hung 46 canvasses representative of the eighteenth century British school —1 Cotes, 1 Turner, 2 Constables, 3 Hoppners, 3 Raeburns, 4 Lawrences, 10 Gainsboroughs, 11 Reynolds, and as many Romneys. Of these paintings, probably the most famous is Gainsborough's "Blue Boy," though Lawrence's "Pinkie" and Reynolds's "Mrs. Siddons as the Tragic Muse" rival it in interest.

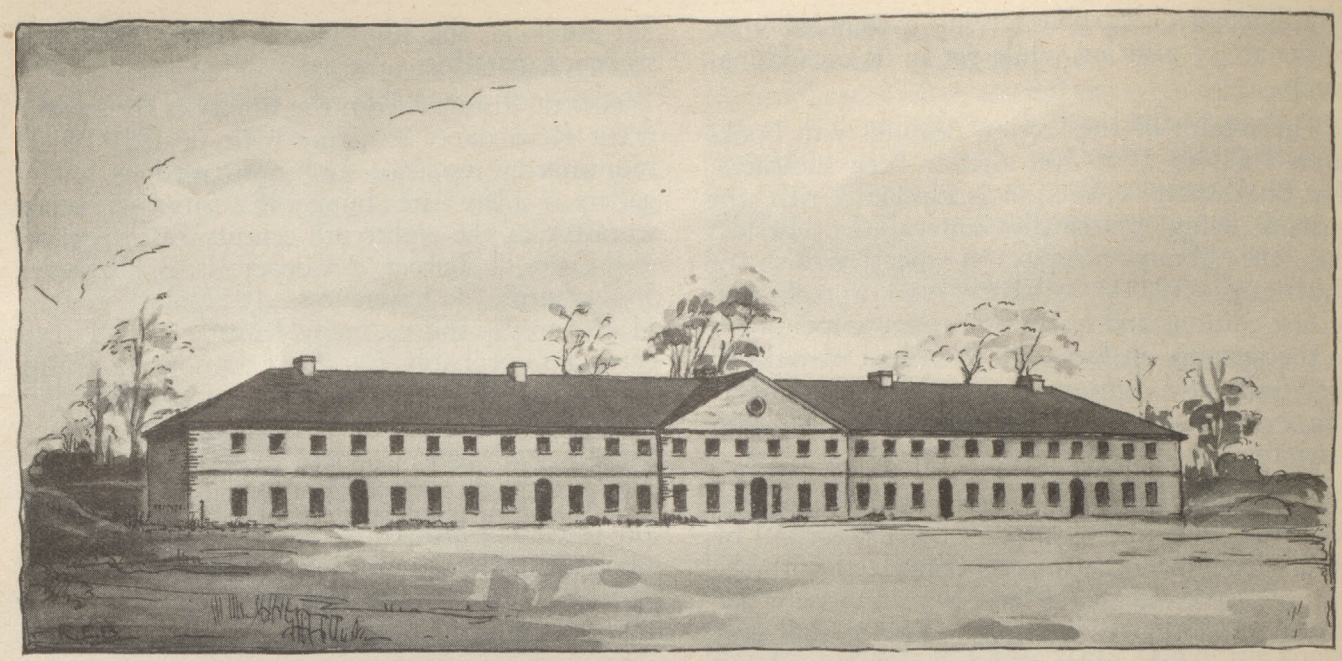
In the last years of his life, Henry E. Huntington interested himself in a collection of Renaissance art which he dedicated to the memory of his wife. This is housed in the West wing of the library building.

No account of the Huntington Library would be complete which failed to give an idea of the beauty of its setting. The Library and Art Gallery are set in the midst of an estate of 207 acres. There are 20 acres of rolling lawn; a fine rose garden; a Japanese garden five acres in extent, with arched bridges over streams dotted with lily pads; a bewildering double row of statues leading to a magnificent fountain; acres of oranges; and trees representing experimental transplanting from nearly every country in the world. The luxuriant specimens of the tree fern make one think of the primeval forests. At one corner of the lawn, an example of the Australian flame tree has never reconciled itself to the "converse seasons" and solemnly sheds its leaves in the California spring which should be its native autumn. A few yards away, one enters upon the eight acres of cactus garden, containing some 20,000 plants. Immediately, the lush growth which water creates as by magic in the fertile California soil is forgotten, and one is in the desert. Grotesque spiny shapes rise high in the air, or writhe in bulbous contortions on the yellow ground. Here and there, blossoms of bewildering beauty only intensify the surrounding horror till the gazer fancies himself in a nightmare prompted by Dante's *Inferno*.

ADDRESS WANTED

The Executive Committee of the Society desires to be put in touch with Dr. A. J. MacMillan, Dentistry 1923, who was formerly practising at 136 Main St., Hull, and 185 Bay St., Ottawa. His home address was originally Apple Hill, Ont.

It will be appreciated if any member will send in this information, which is wanted in the interest of the Society.



THE BARRACKS, FORT LENNOX, ISLE AUX NOIX

The barracks, ramparts, and fortifications of Isle aux Noix form one of the most interesting and beautiful historic monuments near Montreal. Under the care of the National Parks Commission of Canada, the island has been preserved since 1921 from all undesirable encroachment.

Fort Lennox, Isle aux Noix

By RICHARD E. BOLTON

(With illustrations by the Author)

SINCE the days of Samuel de Champlain, Isle aux Noix has played a part in the military history of this country, guarding as it does the only natural highway between the St. Lawrence River and the south. Though the fortress on this island, situated about ten miles from the present United States border, was only one of a number built along the Richelieu during the French régime, it alone remains in a state of almost perfect preservation. Modern methods of warfare and the long continued peace with the United States have rendered it useless for purposes of defence, but it stands as an historic landmark and an architectural monument of unusual interest. So well preserved are the fortifications and so immaculate are the grounds, one finds it difficult to realize it was in 1870, and not a year ago, that the last regiment marched out of Fort Lennox.

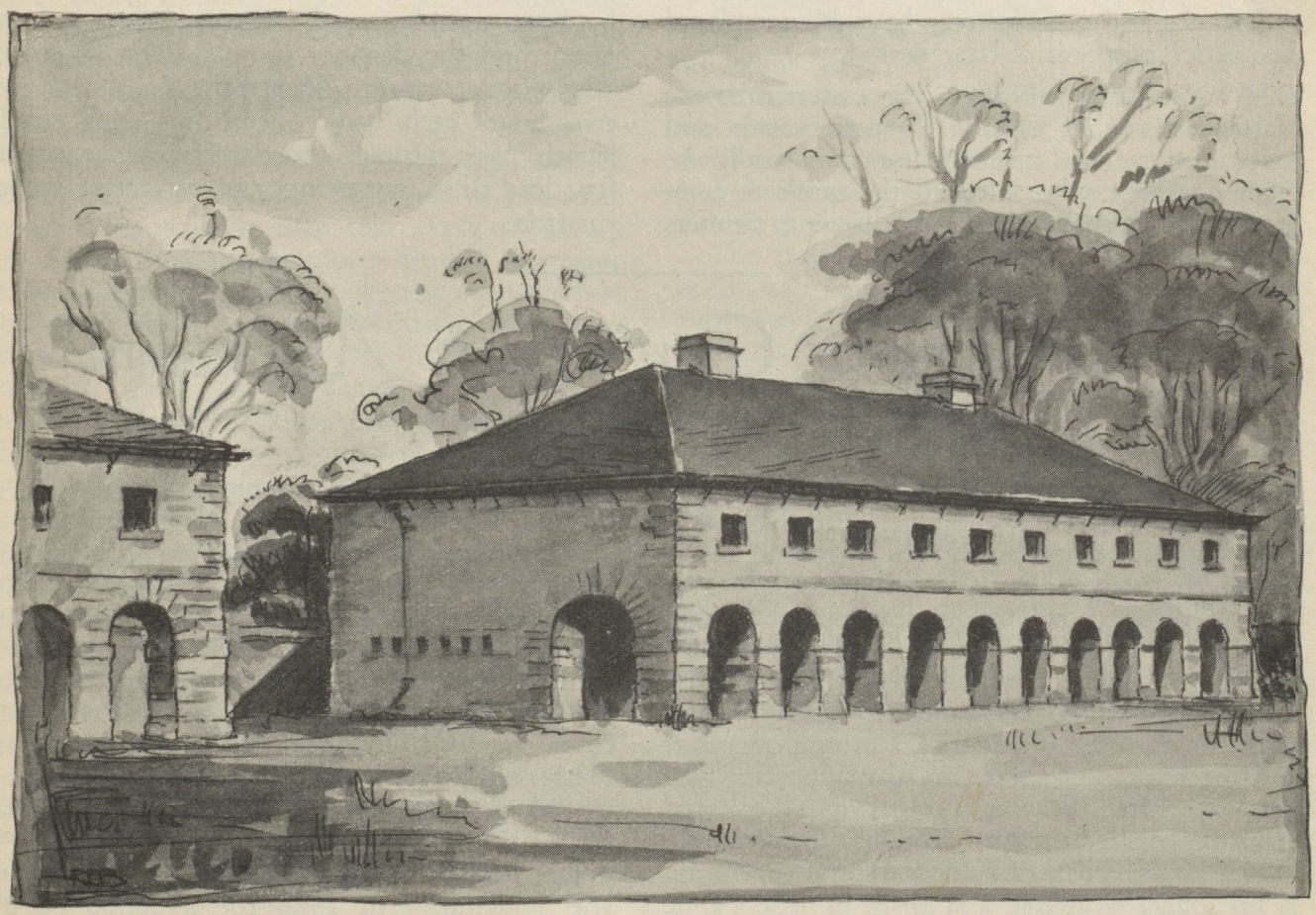
Isle aux Noix first became a real fortification after the abandonment of Carillon and St. Frederic by General Bourlamaque in 1759. Here he, and later de Bougainville, stopped the advance of the English under General Haviland until August, 1760. Seeing then that it was impossible to withstand the siege any longer, de Bougainville withdrew most of his troops during the nights of August 27 and 28, leaving a garrison of only fifty men, who surrendered soon thereafter. The last outpost of New France having thus been taken, Montreal was before long in the hands of the English.

During the American Revolutionary wars, Isle aux Noix was again captured by an army from the south. Generals Montgomery and Schuyler occupied it in 1775, but abandoned it the next year, after their unsuccessful campaign against Quebec. A second American invasion was expected during the summer of 1783, and, in preparation for this, the construction of a new fortress had been started early in the previous year by Major General von Riedesel, commander of four thousand mercenaries from Brunswick. The fortifications built at this time were again found inadequate in 1812, and reconstruction continued for the next fourteen years. All the existing buildings are of this period, including the entrance gate bearing the name Lennox.

Approaching the island from the west, there is little to be seen except roofs protruding above the surrounding earthworks, large trees, and a few cattle, which graze on low land to the north of the fort. Formerly there were buildings here, but they have disappeared, leaving only a few indentations in the ground, among which the drydock built in 1813 can be recognized easily. A few yards beyond the landing stage is the moat, nearly sixty feet wide. From the moat, the ramparts rise steeply to a height which commands a clear view of the river on all sides. In the middle of the north side is the entrance gate, a massive stone arch set in the ramparts and formerly protected by a drawbridge, of which no trace is left. At present the simple beauty of this gate is marred by the removal of the flanking earthworks, which satisfied the visual need of abutment, and by the crude modern bridge which replaces the original one.

On passing through the gate, the jumble of roofs suddenly arranges itself into an orderly group of buildings around a parade ground, the first glimpse being obtained through the arcades of two buildings which flank the entrance gate, the officers' quarters and the guard house. To the right is the barracks, a stately building over two hundred feet long; to the left, opposite it, are the artillery and commissariat buildings, of similar design, though much smaller. The fourth side of the square is effectively closed by a cluster of elm trees and a long horizontal line of earthworks. Then, as a focus to the whole scheme, the eye picks up the delicate silhouette of a sundial centrally placed in the parade ground. This arrangement of the buildings, with its sheltering trees and a green carpet rolling up over the ramparts, seems to have achieved for the fort a complete detachment from the outside world.

For architectural distinction, the buildings of Fort Lennox are entitled to be compared with the Bonsecours Market and the old Court House in Montreal. Unlike these contemporaries, however, they are devoid of ornament, except for the rusticated arcades of the officers' quarters and the guard house, which afford a certain protection against sun and rain alike. Though



THE GUARD HOUSE, FORT LENNOX, ISLE AUX NOIX

Architecturally, the rugged buildings of Fort Lennox possess no small measure of distinction. Though the Island was first fortified by the French, the present buildings date from 1812 to 1826. They are in a fine state of preservation.

the striking effects seem to have been obtained solely by good proportion, no detail of cornice, string course, or windows, simple though it may be, has been neglected. The front of the barracks is a study in the rhythm of windows and doors, relieved only by the gently sloping hipped roof and a low pediment, which caps the central pavilion; yet what a touch of gaiety these bright red roofs have given the severe grey stone. It is customary to speak of the work of this period as being in the decline of the Georgian tradition, particularly in referring to English examples, but these buildings shew a remarkable vigour and purity of design which does not concern itself too much with academic correctness.

Solidity of construction seems to have accomplished that permanence which the rugged architectural design suggests; the exterior walls are two feet and more in thickness, for they must absorb the thrust of massive brick vaults which, in all buildings except the officers' quarters, support the second storeys. So good is the construction that even today there is little need for repairs, except to wooden trim and floors. Unfortunately, some of the delicate wooden architraves and mantlepieces have been replaced by coarser work of a later period.

In 1921 Isle aux Noix was transferred to the National Parks of Canada for preservation and restoration. Too much praise can hardly be given to those who initiated the work now in progress, but the practise of allowing painters to indulge their fancies by executing symphonies in bilious yellow must be condemned, when a small outlay would have procured the services of some one who, by sympathy and understanding of this work, could have directed the zealous painters towards more artistic results. In recent years the ground floor of the officers' quarters has been converted into a museum.

Fort Lennox today is one of our better preserved national monuments. The island itself is removed from cement highways and billboards, and the delicate scale of the buildings is undisturbed by the ponderous magnificence of modern commercial structures, such as one finds along the older streets of Montreal.

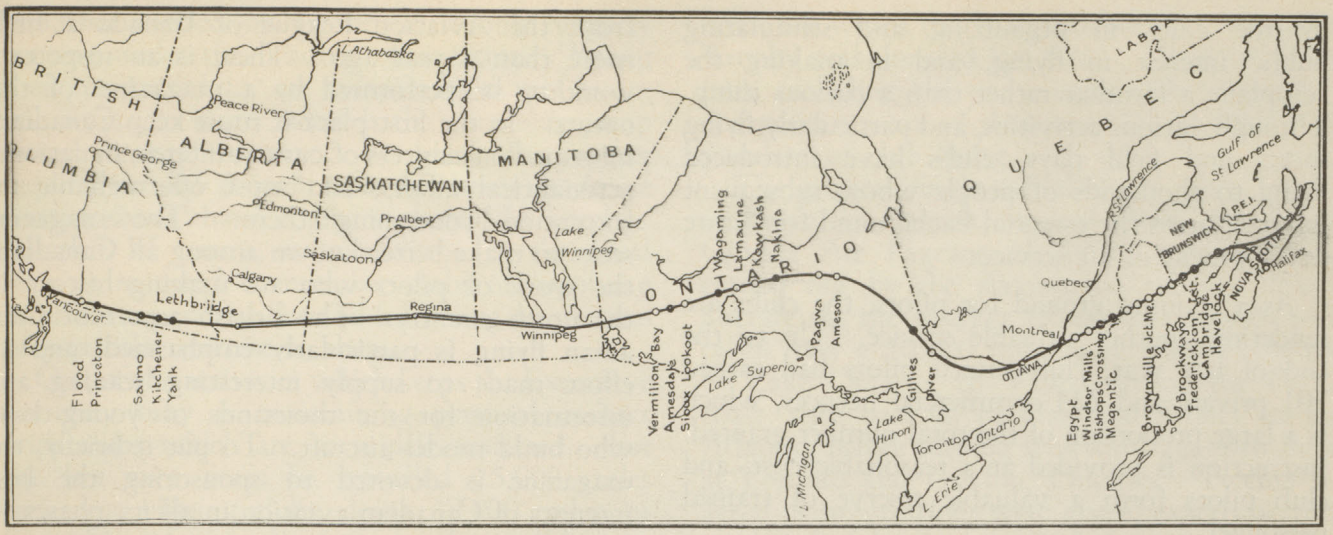
Both the student of history and the lover of architecture will do well to visit Isle aux Noix. With a few hours to spend, and with the excellent little guide book and historical sketch published by the Department of the Interior as a companion, they will well be repaid for trouble in getting there. Actually, the trouble required is not great. The motor route from Montreal is to St. Paul by way of Laprairie and St. Johns, a short run by boat completing the journey; the roads are good; and the distance is only thirty-six miles. The whole trip from Montreal takes a little over two hours each way. Few runs of a similar length pass through more picturesque country; few lead to so interesting and attractive a destination.

Sponsoring Canadian Aviation

By HYACINTHE LAMBART

IT is surprising how little interest Canadians take in aviation. Standing directly in the pathway of future aerial trade routes across the north Pacific and the north Atlantic, we do not yet realize how important these routes will be to us. Nor do we visualize the benefits which would be ours through aerial communications within our own country. In early experimental days of aviation, Canada took a prominent place, and the records of Canadian war pilots are well known. After the war, Federal and Provincial Governments led the way in sponsoring aviation. Now, however, money for extensive operation is no longer available and there is little public support for such expenditures. Subsidized air mail routes are cut to a minimum and activities of the Royal Canadian Air Force are restricted. The brightest spot in the present picture is "up north", where air transportation companies are making a valuable contribution to the development of new territories. The process of "rolling back the map" in northern Canada is gathering momentum every day. For the remainder—a major contribution to both present and future flying is being made by the twenty-two flying clubs sponsored by the Civil Aviation Department, and which are co-ordinated through a central organization—the Canadian Flying Clubs Association.

The scheme of subsidizing these flying clubs was undertaken in 1928 for a period of five years, the fifth year of operation having been completed on March 31 last. The success of the scheme has been well established, and it has



Courtesy of CANADIAN AVIATION

MAP SHOWING THE ROUTE OF THE PROPOSED TRANS-CANADA AIRWAY

A number of the airports shown on this map have been developed by flying clubs. At fourteen points on the route, unemployed men were put to work last winter to prepare additional landing fields. The Dominion Government recently announced that this work would be vigorously continued.

now been extended for another year. The clubs have made an important contribution in developing airports, stimulating public interest in aviation, and in training pilots. When the historian looks back upon the lean and early years of Canadian aviation, he will see more clearly than we do, the importance of the work done by flying clubs.

For the benefit of any who may question the wisdom of providing for the future of Canadian flying, it is well to state that every major air line outside of Canada reports steadily increasing traffic. It is a significant fact that even in these depression days, air transportation is making substantial progress. By way of example, the passenger traffic on the London-Paris route of Imperial Airways showed an increase during 1932 over 1931 of 89.77 per cent. Five services daily are necessary to handle the demand for accommodation. Even in Canada, and in spite of great reductions in air mail, Canadian Airways Limited during 1932 increased their total poundage carried by 75 per cent over 1931. Most of this business was done in the north country, and is indicative of the development which may one day be expected in scheduled inter-city air traffic.

While the same sparseness of population and scarcity of intermediate traffic which burdens our railway systems will likely retard the development of our air services, it will never handicap them to the same degree. One day we shall make extensive use of aircraft for fast communication. Many private owners will use aircraft to get about from place to place and commercial firms will send their representatives to do business by air. Mails will be flown from coast to coast in less than one day. (Already the United States is operating a 17-hour trans-continental express service.) Canada will find herself the jumping-off point for air routes to Europe and Asia, and these may not be very far in the future. When this day comes there will be a great demand for airways, airport facilities, and trained pilots, and intelligent public interest will be needed. To all of these the flying clubs are contributing.

The trans-Canada airway, now being developed, will form the main trunk system of our air routes. Laid out and surveyed by the Civil Aviation Department, the route of the airway has already been determined. On the sites of fourteen future airports unemployed are at work preparing the land, but for the most part the airway takes advantage of established airports. Many of these have been developed through the efforts of flying clubs. When it is said that flying clubs have been directly responsible for developing eighteen of our major airports, and have assisted in the development of fifteen others, it is clear that a notable contribution has already been made. In many cases they have organized and facilitated generous civic assistance towards airport development. To quote *Canadian Aviation:* "Time alone and the daily use of scheduled air transportation, which is bound to come as surely as night follows day, will bring into the light of public appreciation the national service rendered by those responsible for opening up a network of airports to make air services possible."

A great deal of good work has also been done

by the clubs in organizing and stimulating public interest in flying, and in making the aeroplane a familiar rather than a curious thing. Through various activities, and particularly flying meets and field days, clubs have introduced flying to thousands of people whose subsequent interest forms the essential background for future development of air services.

As a training ground for pilots, the clubs are rendering another valuable service. Up to the end of last year, club-trained pilots had earned 701 private and 224 commercial licences, which is a large proportion of the total number granted. Instruction is provided at a reasonable cost, and club pilots form a valuable reserve of trained personnel.

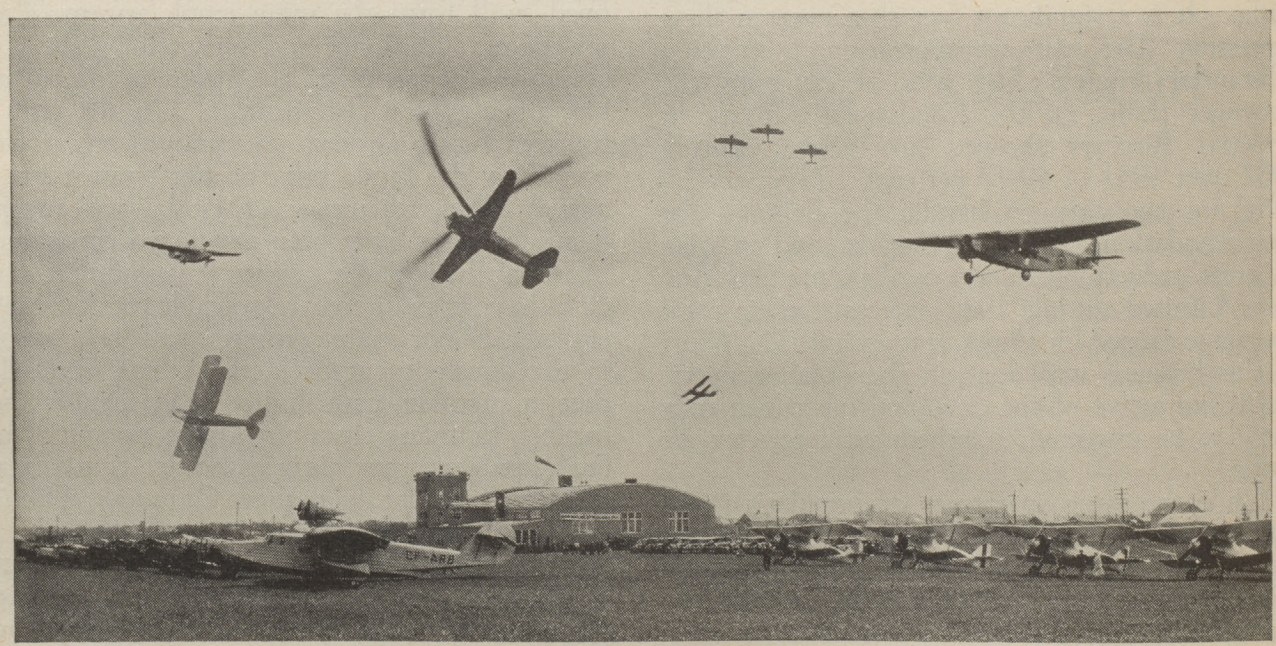
When it was realized that the clubs were proceeding to fulfil the purposes for which they were established, the Canadian Flying Clubs Association was organized to co-ordinate their activities and act as a liaison body between the clubs and the Department of Civil Aviation.

The office of the Association is maintained in Ottawa. Its functions are many and varied. To the duties which at the outset formed the work of the Association, there have more recently been added several responsibilities of a national character, in the interests of all phases of aviation.

First among these might be mentioned the publication of Canada's only aeronautical magazine—*Canadian Aviation*. It was taken over from the Aviation League of Canada a little more than a year ago. There is an important work to be performed by a magazine of this nature. In the first place it must keep Canadians informed on subjects of current interest in national aeronautical affairs, and must offer reliable information concerning them. The magazine seeks to make better known among all Canadians the work of pilots who are making history in the north country. The British aspect of Canadian flying is particularly emphasized, and an effort made to supply interesting reading and information for the thousands of young boys who build model aircraft. To put it briefly, the magazine is devoted to sponsoring the best interests of Canadian aviation in all its phases.

The Canadian Flying Clubs Association has also assumed the responsibility of representing Canada on the international governing body for sport and competition flying—the Federation Aeronautique Internationale. The writer had the privilege of attending the 31st annual conference of this organization in The Hague last September. It is interesting to note that Canada is the first British Dominion to be granted membership in the Federation, and the first to share in the regulation of the world's sport and competition flying.

The day-by-day work in the office of the Association varies widely and provides a certain amount of humour on the way. There is an astonishing breadth of subject in the corres-



Courtesy of CANADIAN AVIATION

THE TRANS-CANADA AIR PAGEANT OF 1931

This composite photograph, taken at Edmonton, shows the types of aircraft taking part in the tour. More than 10,000 miles constituted the route and twenty-six aerial demonstrations were given. These were attended by 325,000 spectators.

pondence carried on—some of it only vaguely coming under the heading of aviation. Young men request advice on aviation as a profession; one wants to know what is the parachute jump record because he wants to break it; another requires an old propellor for his home-made ice boat; a second-hand engine is desired by another. All this, of course, is in addition to the usual services rendered to member clubs in supplying information and advice and following up matters of particular interest to them.

One of the activities which keeps the Executive Secretary busy is maintaining personal contact with clubs which are so widely scattered. For the last two years he travelled 25,000 miles each year visiting clubs, doing 20,000 miles, or four-fifths of this distance, in the well-known red and white Moth CF-AAA. This aircraft was presented to the Aviation League of Canada by Imperial Oil Limited in 1929 and is of great assistance in the work of the Association. It is made available through the kindness of the League, and continues to serve the interests of national aviation. The close contact maintained with clubs by the Executive Secretary assures that the experience of all shall be applied to the difficulties and problems of each. The pooling of information on many topics is of considerable assistance to individual clubs.

As part of the Association's plan to stimulate interest in competition flying and improve the proficiency of club pilots, the clubs have been divided into three zones, in each of which annual general proficiency competitions are held. The winners are brought together for a Dominion final, for which the beautiful Webster Memorial Trophy was donated last year. These competitions, including the preliminary club elimination competitions, are of definite value in raising the standard of club flying.

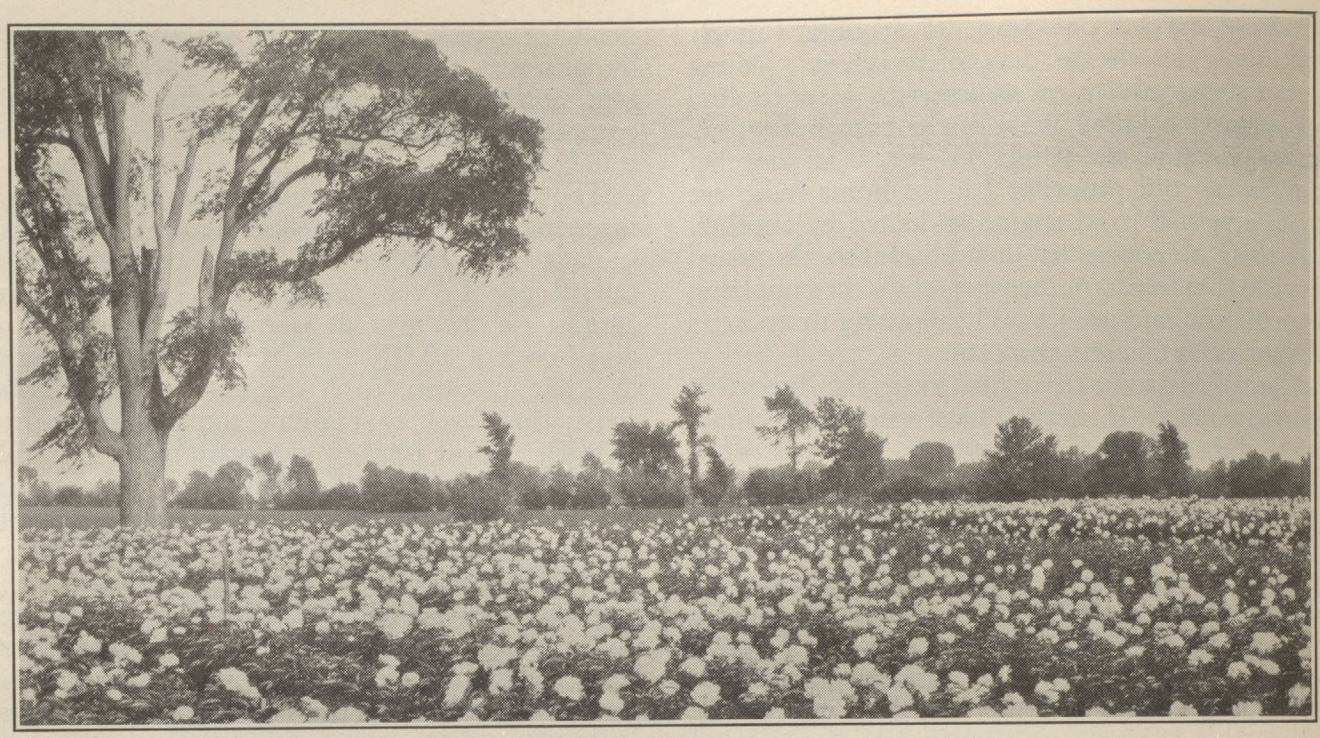
The greatest single stimulant to public interest in flying in Canada resulted from the Trans-Canada Air Pageant of 1931, organized and carried out by the Association. About fifteen aircraft on the average (sometimes more) were taken over a 10,000 mile route from Hamilton by Lake Ontario, to Vancouver on the Pacific coast; then back to Halifax and Sydney on the Atlantic, before turning westward again to finish at Toronto and London, Ontario. Twenty-six aerial demonstrations were given, exactly according to schedule, over a period of ten weeks. More than 325,000 people actually witnessed the performances, and, if the eulogistic press reports are any gauge of success, the Pageant more than fulfilled its purpose of stimulating public interest in flying. This Pageant was the most ambitious undertaking of its type carried out up to that date, and it has already become a notable part of the history of Canadian flying.

As is perhaps apparent, the Association is undertaking a large and somewhat varied task in sponsoring aviation in Canada. Organizing and promoting the activities of the flying clubs from coast to coast as a primary responsibility; representing Canada in the world's international air federation; and publishing the Dominion's only aeronautical magazine, are services which may be claimed as valuable to both present and future flying in this country.

The Peony: A Bloom with an Ancient Lineage

By ALBERT SWINDLEHURST, LAW '95

YEAR by year the peony grows in popularity throughout Canada, and never was tribute better deserved. It is early, it is hardy, it is beautiful. So old is the plant that the name has its origin in mythology. Homer sings of its virtues and relates that when Pluto was grievously wounded by Hercules, in the Trojan War, Paeon, physician of the gods, was called to attend him. He in turn consulted Apollo, the great god of healing and father of Aesculapius, "Apollo made intercession with his worthy parents Zeus and Leto, with the result that Paeon received the first peony from the hands of Leto on Mount Olympus. With this pain-assuaging herb, he healed the wound of Pluto. This cure caused much jealousy in the breast of Aesculapius and he plotted the death of Paeon. Pluto, however, in great gratitude for what Paeon had done, determined to save him from the fate of mortals and changed him into the living plant that had



A FIELD OF PEONIES, HAWTHORNDALE, MONTREAL

Peonies will be in bloom everywhere as this issue of *The McGill News* is distributed. Mr. W. O. Roy's spectacular fields of peonies at Hawthorndale will as usual, it is expected, attract a host of interested visitors.

effected the cure—the Paeonia, and from that time the name has endured."

The peony known to the Greeks was the species *Officinalis*, the old "Red Piney" of our day, the earliest detailed description of which is to be found in Pliny's Natural History. Through the centuries it was cultivated and loved in Enrope, and the French settlers in Canada brought roots to the new land to remind them of gardens left behind. In many localities around Louisbourg may still be seen the descendants of this original stock.

It is, however, from another species, *P. Albiflora*, the Chinese peony, that most of our superb varieties have been developed. Like the *Officinalis* it was at first used medicinally, but became especially prized for the glory of its blooms. For more than a thousand years the love of the Chinese for this flower, which they called SHO YO, meaning "most beautiful", has been an absorbing one, and there are charming folk-lore tales which tell of the spirits of peonies that assumed human form to reward the devotion of those who loved and cared for them. So great was their veneration for this plant, a semi-sacred flower, and so strong their opposition to its cultivation outside of China, that it was only after many unsuccessful attempts that Joseph Banks, a wealthy London merchant, obtained in 1805 a few roots and was enabled to offer the first double Chinese peony to English gardeners.

Since then the work of plant hybridizers has been carried on with unremitting zeal, and from the crossing, presumably, of the Banks' variety with a small single flowered Siberian form, all the Chinese herbaceous peonies of the present day have been developed. In England, France, and the United States blooms have been produced which approximate perfection. Peonies are judged by colour (25%), form (15%), size (15%), distinctiveness (15%), substance (10%), stem (10%), and fragrance (10%). How nearly the cultivators of the peony have attained their objective is seen in the rating of Le Cygne, a pure white, at 99%, Kelways Glorious, another white, and Therese, a pink, at 98%, with Solange, a pale salmon-pink, close behind at 97%.

The difficulty of raising new varieties of peonies would daunt any but the most ardent hybridizers. Due to very dense coating, seeds germinate slowly, two years being the average time necessary for the appearance of shoots. Three more years are needed for the development of bloom. Then, if out of every thousand seedlings half a dozen are worthy of further observation, the patient grower considers himself well repaid. Chance is a great factor in success. Dessert, the celebrated French hybridist, one day noted a pod in which were only two seeds. Both developed

into plants of outstanding merit; one of them the famous Therese.

While hundreds of variations in form and shade of whites, pinks, and reds have been produced, other colours evade the hybridizer. There is an illustration in an old Chinese book of a blue peony, but if it ever existed, like the Great Auk, it has disappeared. The black peony is also mythical. Madame Yukio Ozaki says: "Last year my friend the abbot, who at times instils into my mind some of the ten precepts of philosophy, led me to contemplate the beauty of a superb trophy of the temple garden growing near the verandah of his cloister. 'This' said the learned man, 'is a black peony!' 'A black peony'! I ejaculated in surprise, 'never have I heard of a black peony', and I stooped in wondering curiosity over the rare specimen to examine it carefully. What met my eager gaze were very dark maroon-red flowers, the tone of colour deepening toward the centre of the petals and the heart of the corolla. With a little willing stretch of the imagination a connoisseur might easily call it a black flower. It was, however, a deep claret-red with darker veining". The efforts of present-day hybridizers are mainly directed to the development of a yellow peony, and the American Peony Society offered a prize of $1,000 to the first producer. Burbank made the attempt, but with all his wizardry he failed, which confirmed his opinion that the older the history of a plant the more difficult it was to change its colour.

The peony attains its greatest perfection in Canada and a notable impulse was given to its cultivation here when Mr W. Ormiston Roy brought thousands of plants from the famous growers in Europe. For more than twenty years he has devoted time, energy, and money to popularize this flower in the Dominion. He demonstrated the keeping qualities of the cut bloom, and the suitability of the peony to our climate, by sending to the Wembley Exhibition 10,000 blooms of such excellence that the Royal Horticultural Society bestowed upon him the Banksian Medal for outstanding achievement in horticulture.

It has been suggested that a Canadian-grown peony should be planted on every Canadian soldier's grave in the war cemeteries of France and Flanders. This is not a new idea, for in one of the most beautiful temple enclosures in Japan peonies are planted among the tombstones as a symbol of the renewal of life.

Another proposal is that the peony be adopted as our floral garden emblem. Ever since Canada's Diamond Jubilee, when the Prince of Wales made a parting souvenir gift of a set of peony roots to every village, town, and city in the length and breadth of our country, the peony has been increasing in popularity and many garden lovers would like to see it adopted as Canada's floral garden emblem—not to replace the maple leaf as our national emblem, but as a Canadian garden club emblem. Nothing could be more typical of young Canada than the peony. It flourishes in every part of the Dominion, revels in summer sunshine, and gains strength from the rigours of winter.

Honours in Two Generations

AMONG the recipients of higher degrees from the University this year is Miss Mary Elizabeth Binmore, who received an M.A. in Education. Older graduates have remarked that this honour is linked with the history of the Alumnæ, since the late Miss Elizabeth Binmore,



MISS ELIZABETH BINMORE, M.A. '94

Miss Binmore, who died in August, 1917, shared with Miss Euphemia McLeod, M.A. the honour of being the first woman to receive an M.A. degree from McGill University.

M.A. (an aunt of the present day graduate), and Miss Euphemia McLeod, M.A. were the first women to obtain that degree from McGill University, in 1894. As far as can be ascertained, this was the first occasion on which the degree of Master of Arts was granted to any woman in Canada.

The late Miss Elizabeth Binmore was a graduate of the McGill Normal School for teachers, entered the Arts course of the University under the Donalda Endowment régime, and graduated in 1890 with the degree of B.A. She engaged in teaching that year and in 1896 was the first woman to be elected President of the Teachers' Association for the Montreal District. She was a pioneer in advancing the Sloyd method and advocated the use of manual training, of music, and of the "natural" French method in the public schools. In 1893 she was awarded an A.B. by Harvard University. Her post-graduate course was undertaken under the direction of the late Professor D. P. Penhallow. She was President of the McGill Alumnæ for the year 1898.

Miss Binmore died in August, 1917, but her personality is still remembered vividly by many friends and pupils, among whom is Walter M. Stewart, Esq., a Governor of McGill University.

—M.H.S.

Mrs. Frank H. Pitcher

(Harriet Brooks)

BY the death of Mrs. Frank H. Pitcher, McGill University has lost one of the most distinguished of her women graduates.

Harriet Brooks graduated in 1898, winner of the Anne Molson Gold Medal in mathematics and physics. She continued her researches in physics at Cambridge in the Cavendish Laboratory under Sir Joseph Thompson, at McGill with Lord Rutherford, and at the Sorbonne in the laboratory of Madame Curie. She will be remembered in the domain of science as discoverer of the recoil of the radio-active atom, a brilliant piece of work carried out at McGill under the direction of Lord Rutherford.

After her marriage in 1907 to Frank H. Pitcher (Science 1894), Mrs. Pitcher gave up her active participation in scientific work, and turned her attention in other directions. In 1923-24 she was President of the Women's Canadian Club, and for several years she served as a member of the Scholarship Committee of the Canadian Federation of University Women. Members of the McGill Alumnae Society will remember the delightful garden party given in honour of Dean Moyse in the grounds of her residence on Queen Mary Road.

Although Mrs. Pitcher's public activities were so noteworthy, it was in a more restricted and intimate circle that she was most admired and appreciated. Too often a woman of distinguished attainments pays the price of her scholarship by a loss of those feminine qualities which endear her to those in her immediate surroundings. It was not so with Mrs. Pitcher. The most gracious of hostesses, the kindest of friends, she was truly beloved by all who knew her. Her gentle and unassuming manner, her low-pitched voice, her keen sense of humour, her never-failing interest and sympathy, all contributed to the charm of her personality.

Mrs. Pitcher's garden was one of her keenest delights, and during many years in Montreal and at her country place at Val David, she proved the truth of Bacon's words, "Gardening is the purest of human pleasures and the greatest refreshment to the spirit of men." Her knowledge of plants, of trees, of birds, her joy in the beauties of forest, field, and sky, and in all the varied manifestations of nature, were well known to all her friends.

Not less remarkable was her knowledge of literature. Never led astray by the false or meretricious, her judgment was exceedingly sound. She was an example of the value of education in training the powers of the mind, in purifying the taste, and in developing that discrimination which enables us to distinguish the genuine from the spurious, the essential from the non-essential.

By her death a gracious figure, a kindly presence, has disappeared from a circle which will always cherish her memory as a proud possession.

CONVOCATION TEA DANCE

The Montreal Branch of the Society lent assistance to Mrs. Vaughan in arranging for a tea dance on Convocation Day, to which all members of the graduating classes were invited. The orchestra was provided by the Montreal Branch Society, and the Royal Victoria College arranged for the use of their rooms and provided the refreshments. Mrs. Vaughan received the guests in the new wing of the College.

It is hoped that such a function may become an annual event on Convocation Day, to fill the gap left by the abandonment of the garden party, and as a means of bringing the new graduates, their parents, and friends into social contact with the University.



TRANSPORTING THE CANADIAN GUNS UP THE EMPTSA RIVER, OCTOBER, 1918

Great flocks of wild duck were in flight as this cold journey was made and a round of shrapnel, fired into the air from the 18-pounder gun on the right, added a bag of six birds to the Canadians' rations.

With the Canadian Guns in North Russia, 1918-'19.

By COL. WALTER C. HYDE, D.S.O., B. Arch. '15.

IN the winter of 1919, a heading in one of our daily papers mentioned that Canadian troops had been in action with the North Russian Expeditionary Force and had suffered casualties in an area light-heartedly identified as "Siberia." This editorial carelessness, or ignorance of geography, had amusing results. The editor received some caustic criticism—and a brand new atlas. But, in spite of this and the fact that six hundred Canadians spent many weary months on the Dvina River in 1918-1919, Archangel, Murmansk and the Dvina remain names which few trouble to locate on the map. For this reason, and because the North Russian venture was an interesting strategic experiment, the experiences of the North Russian Expeditionary Force deserve more publicity than they have received.

In the summer of 1918, the movement of German divisions from the collapsed Eastern Front to the Western Front was causing grave Allied concern, and many schemes to halt this movement were given consideration. A factor which aggravated the situation was that, with Russia disposed of as an enemy, the White Sea and Murmansk Coast were available for German use as naval and submarine bases. The North Russian Expeditionary Force was formed to counteract these German moves or, in other words, to consolidate the northern tip of the Allied line. Another objective, hinted at as a possible result

of the activities of this force and of other Allied forces, operating in three different parts of Russia, was to revive the morale of the White Russians. The three Allied Forces would, as a consequence, become augmented by the enlistment of White Russians and the strength of the opposition to Germany would increase. Operating from Archangel, Vladivostok, and Czecho-Slovakia, the three forces would eventually move and, uniting, would again threaten the German Army on its Eastern Front. Needless to say, this task was a tall order, but, had the plan been successful, the Peace Treaty would have been concluded on very different terms and, some go so far as to claim, Bolshevism would have been nipped in the bud.

Canadian participation in this Allied scheme was planned in August, 1918, when Canada offered to contribute a brigade of artillery. This brigade (the 16th Brigade, Canadian Field Artillery, commanded by Col. C. H. L. Sharman, C.M.G., C.B.E. and composed of Headquarters and the 67th and 68th Batteries) was recruited from casualties and reserves on the strength of the Canadian Artillery Reserve Depot, Witley, England. Volunteers were called for, and the only difficulty experienced was due to the excess of candidates. Less than one month was required to recruit and equip the formation "for service in an unknown theatre of war."

On September 21, 1918, the Brigade embarked at Dundee, Scotland, on the troopship *Stephen* and, together with the personnel of the Force Headquarters, a number of unattached officers, a company of French troops, and British details, completely filled the ship. The embarkation was not without incident, for a dockers' strike threatened to disrupt loading operations. The difficulty was overcome, to the disgust of the striking stevedores, by the Canadian gunners, who completed the loading of the ship themselves.

The voyage from Dundee to Archangel was uneventful. Scapa Flow, the Orkneys, and the Shetlands were glimpsed in passing and the next landfall, the North Cape of Norway, was soon sighted. This was the real portal to our new field of experience. Seven days after leaving Dundee, the *Stephen* docked at Archangel, amidst the tooting of whistles of boats of many nations and a vociferous welcome from many tongues. I cannot take space to describe the port of Archangel, but some idea of the atmosphere that prevailed there at the time may be gained from a description of one of the most prominent temporary inhabitants.

Shortly before the advent of the Allied forces, there arrived in Archangel, at the head of a squadron of Cossack cavalry, a gentleman who in bearing, training, wit, and daring was more than equal to the situation. This man, Prince Aristoff by name, had been in command of a Southern Cossack regiment when the Revolution started. He was stationed near Moscow at the time with a squadron of his regiment. He was not a Czarist to the point that adherence to that side would have been normal; on the other hand, generations of feudal control by his family of their Georgian vassals made him skeptical of the policies of the Revolutionists. He was a brigand chieftain by nature and inclination, and wanted time and experience to indicate the course he had best follow. Characteristically, therefore, he issued orders and attractive promises to his Cossack followers, and these resulted, subsequently, in the arrival of his independent adventuring command in Archangel.

Here our brigand chief took stock of the situation and saw his opportunity. He had under his command the only organized military force in the area; the city fathers had lost control; and there were two distinct factions represented in the official population. The factions were, first Russians whether White or Red; and second, the large group of foreign diplomatic officials. One or other of these represented ultimate authority; and the man wise enough to choose between them would have been very wise indeed. Either Bolshevism would swamp the country and effectively dispose of the Whites, or the Allies would take a firm hold on Russia and stamp out the Revolution. It was an even chance whether Allies or Bolshies would control Archangel first, so the only thing for the wise man to do was to be prepared. Our brigand chief, therefore, captured the city which, under the circumstances, was not a difficult military feat. A great deal of noise, some shooting and dashing about by his wild-looking Cossack horsemen, coupled with a calm assumption of authority on his part, soon placed disorganised Archangel in his control.

His next step was to commandeer the City Hall, the hotels and the banks. Into as many hotels as were necessary he herded all the would-be Red and White Russian leaders; into others he coaxed the foreign representatives. Some of the contents of the banks served to cement the loyalty of his Cossacks. Promises of later subdivision of currency made them his slaves to an even greater degree. And Archangel knew a measure of organisation and control that had been lacking for months.

Having accomplished his coup, Prince Aristoff sat down in princely complacency to await developments. The Allies arrived. They were

accorded a dignified and respectful welcome by the Prince, who, in presenting the "Keys of the City" to the Allied staff, explained what pains he had taken to ensure the safety and comfort of the Allied (and foreign) representatives; and, at the same time, how he had provided for the safety of all White Russian leaders. As a final stroke, he delivered over in custody to the Allies a very potentially troublesome group of Reds. All thereupon agreed he was a fine fellow indeed and when, with fitting modesty, he accepted an invitation to join the Allied cause, satisfaction knew no bounds. Official thoughts simultaneously because engrossed with so many other important matters that the question of banks and their contents received no consideration for some months. In January, 1919, it fell to my lot to arrest this very interesting brigand and to deliver him, in custody, to Archangel. But that episode is a story in itself which, were I a writer and able to handle the subject, I would include in a collection of tales in which Prince Aristoff would appear as hero, villain, benefactor, thief, man of letters, master of languages, and lover of the works of Kipling.

After some days of organising and equipping at Archangel, the Brigade was transshipped from the *Stephen* to a huge Dvina River lumber barge, in which we were to be towed up river some two hundred and fifty miles. A word about Dvina River barges is necessary if later confessions are to be justified. Our barge was about two hundred feet long and forty feet wide. Its hold was some ten feet deep, and when loaded it drew about five feet of water. This was the important point in the barge design, for the Dvina is a shallow river in which shoals occur at frequent intervals. The main deck of the barge was roofed over, but otherwise it was open, except at each end where deckhouses twenty-five or thirty feet square occurred. Winter had set in, although it was still early in October; snow had fallen, and at night ice formed along the shores of the River. Imagine our feelings when forced to contemplate a week's jaunt under such weather conditions in an unadorned Dvina River barge. There was no alternative means of transportation, so the best had to be made of a bad job, and the transformation which took place overnight in that barge will remain in my memory as a monument to the ingenuity, resourcefulness, and acquisitiveness of our men. The only grousing heard was obviously designed to draw a herring across the trail of officialdom, who feared the worst until our moorings were cast off and very, very slowly we were snaked out into the river.

The appearance on the dock, at the last moment, of the captain of the *Stephen*, suitcase in hand, demanding the return of most of his ship, or conversely, his transfer to the command of our barge, appealed to the humour of the whole Brigade. We were sorry for our old friend, but his ship couldn't leave Archangel until the spring, and by that time we would be able to return to him the hammocks, bunks, cabin-lamps, and other creature comforts which had seemed so essential to the successful continuation of our journey by water.

The voyage of the barge was a memorable one, and in the first five days we covered some hundred and fifty miles. It would require a volume to describe the episodes of the trip, for each day produced incidents or accidents full of interest and amusement to Canadians. To Russians, however, these occurrences were just part of the day's work. Before we had been a day afloat, we found we were not justified in assuming that the river steamer acting as our tug would continue to tug us for any definite period. It required seven different steamers to get us to our point of disembarkation. The tugs failed to tug for reasons as varied as—lack of fuel and too deep draught to approach shore for more fuel—too deep draught to negotiate bars in the river—insufficient power to tug the barge off a bar—disinclination of the tug captain to have anything more to do with us. There were also the ordinary marine hazards, such as lost propellor, leaking boilers, and lack of energy on the part of the stokers.

The R.N.V.R. lieutenant who, as River Transport Officer, was responsible for our delivery at the advanced base, was a wonderful character. He dealt with all the tugboat difficulties and his methods of upholding the honour of the British Navy were weird but effective. His "flagship" had been a low-powered Archangel tug, but under his command it had been transformed, if not rejuvenated. By the skilful application of canvas bulwarks, woodwork, and much paint, a new form had been born, and when to this was added a fearsome whistle, a one-pounder bowchaser, and two Vickers machine-guns, none could gainsay the authority of the Navy. Large nameplates at bow and stern proclaimed to the floating population of the Dvina and tributaries that "H.M.S. BASHER" was there, to order and to be obeyed, and in spite of a maximum speed of "both knots," as claimed by her Captain, the *Basher* was always in the thick of all river disputes and difficulties.

Convoyed by the *Basher* and tugged by an assortment of river craft, our first official stop

was made at the junction of the Dvina and its tributary, the Emptsa River. Here we detached a section (two guns) of one battery, with the necessary technical personnel to permit this section to do duty as a battery. Some thirty miles up the Emptsa was one element of the River Forces, protecting the right flank of the river frontage. There was another detail of the Force farther to the right, or south, but this detail operating an armoured train on the Archangel-Vologda railroad, was controlled from Archangel, and therefore was detached from the Force operating on the Dvina and tributaries.

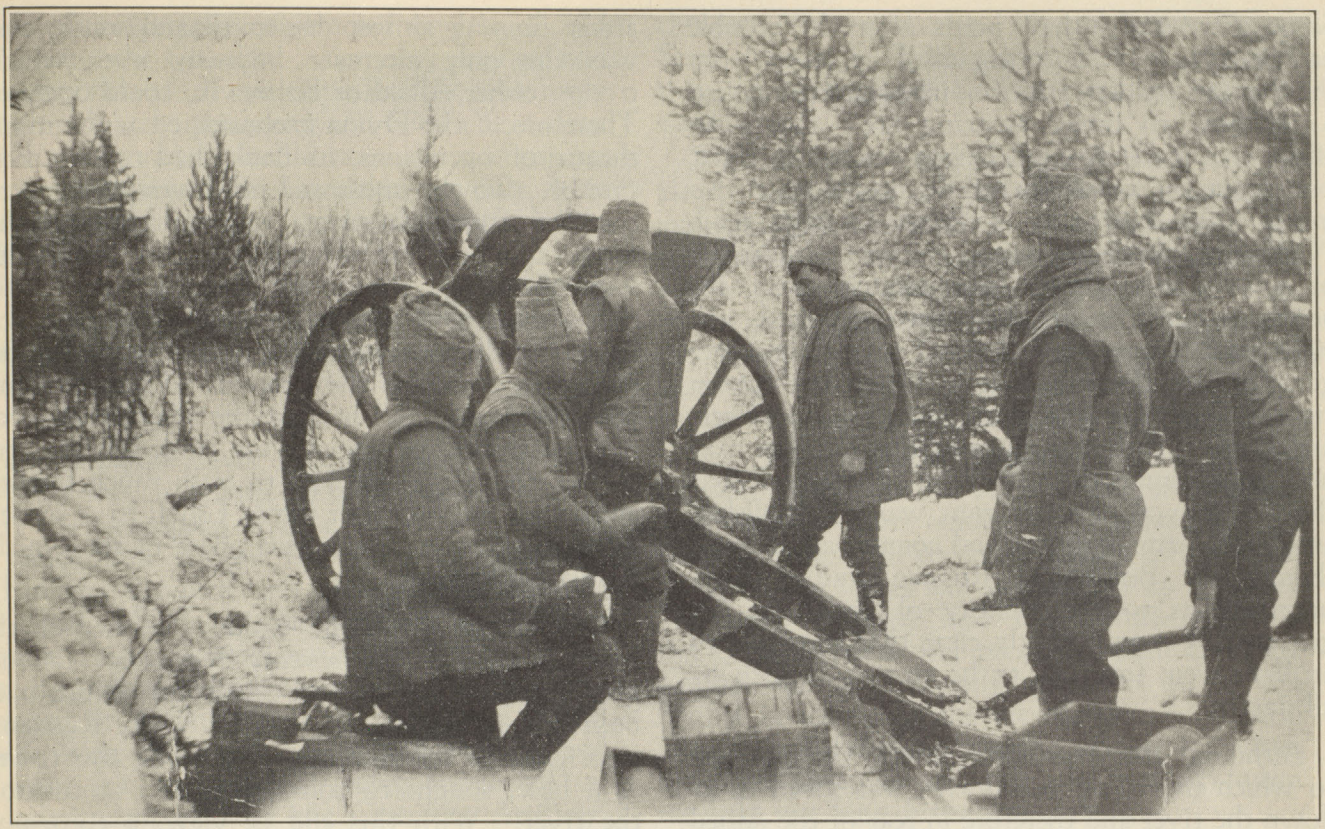
The Canadian Emptsa detail was immediately confronted with typical Russian difficulties. The guns had to be unloaded from the barge without the aid of mechanical power. A gang-plank had been carried for this purpose and man-power tackled the situation successfully. The landing was made on a barren promontory, two miles from the town which was the base of activities on the Emptsa. Man-power propelled the guns and stores across this barren two-mile stretch, after which, with more super-human effort, they were again embarked on small river scows.

After a wait of a few days for orders in regard to the transportation of this section up the Emptsa River, a move was at last made, and, towed again by a wood-burning and decrepit steamboat, two scows carried the two guns, their crews, and headquarters thirty miles upstream. On arrival at Seletskoe, the base of this River Force, further transportation difficulties were encountered. The river was narrow, muddy, and so shallow that the scows could not be moored close to the steep, slippery bank. There was no wharf and we had left our portable gang-plank on the main barge. After some strenuous work with axes, sufficient small trees were felled to provide material for a rough skid, or bridge, twenty feet long and with this contraption and the aid of improvised gin poles the guns were finally manhandled ashore. Before further progress could be made, however, the hardest nut of our whole Russian experiences had to be cracked. Progress from Seletskoe had to be made overland, and I say overland advisedly, for roads in that part of the country were merely forest tracks, which wound in and around tree stumps, over rocks, and through streams or pools. Field artillery, according to the text books, is light artillery and is designed to be capable of negotiating rough country. But the man who wrote the text books on artillery training and the man who designed the eighteen-pounder gun had never met a North Russian horse when they stipulated that field artillery should be "horse-drawn". How we admired our staff that morning when the local Supply and Transport Officer finally convinced us that the menagerie he had assembled for our use were to be accepted as "horses, draught." The Shetland pony is a sturdy animal, and so is a highland sheep-dog, but a cross between the two seemed incongruous, to say the least, and estimation of their value in terms of horse-power was futile. But the guns must go forward, so the task of acquainting the Russky horse with the British gun was started. Imagine harness, split new out of ordnance crates, harness designed for horses of twelve hands or more. Imagine, on the other hand, horses so small that the feet of an average driver dragged on the ground when mounted. To add further interest to the situation, each Russian horse had with it its owner, whose whole aim in life seemed to be to frustrate co-operative effort. Eventually, however, the harness and the hairies were reconciled and with ten and twelve animals to each gun hitch, amidst terrific shouting, shoving, and kicking, the guns moved off toward the front. Actually, fair progress was made, and it was surprising how quickly these pitifully undernourished, scrawny animals fell into their allotted new task. About twenty-one versts were made in the first day, and I do not believe that the British artillery horse could have done better in the circumstances.

This was the manner in which the first Canadian guns moved into action in North Russia. The action that followed was a series of offensives and counter-offensives, designed to maintain control of this river artery; and the Canadian battery section, together with a battery of Russian artillery and forces of American and Russian infantry, was kept occupied and on the qui-vive for some six months.

The remainder of the Brigade, meanwhile, proceeded up the Dvina on the main barge. On arrival at the junction of the Vaga and Dvina Rivers, another split up was made, to provide guns for forces operating on the Dvina and on the Vaga.

The Dvina River force pushed on some forty versts up the river to a forward area, based on the town of Kurgoman on the right bank of the river and having elements on the left bank, centred round the village of Tulgas. Throughout the winter this force was active. The Dvina was the main line of communication from south to north and the Bolsheviks were on the alert to deny us free use of this artery. As the main



RUSSIAN GUNNERS WITH THE N.R.E.F.

These men, members of a Partizan, or White Russian, Battery, remained loyal at Tulgas, on the Dvina River, on April 25, 1919, and saved their guns, when the Russian infantry mutinied and killed 13 British officers.

Bolshevik force was operating on the Dvina, our force had to be comparatively strong and this situation caused much concern. Owing to the shortage of non-Russian troops, the force was obliged to depend to a larger extent on White or Partisan Russian assistance than were the smaller forces on the other rivers, and this soon led to difficulties.

The policy of the Allied command had been to assist, rather than to control, and efforts had been made to develop the White Russian units with which the Allies were associated. This was done by instruction, encouragement, and assistance, even to the extent of supplying British officers to complete the establishments of units. Then, when a unit had progressed in its training, the first opportunity was grasped to give it a chance in an independent action. Once a Russian unit obtained self-confidence, its training was simplified. A reverse in the early stages, however, produced an inferiority complex which nullified all efforts spent and usually necessitated the breaking up of the unit completely. So we made every effort to produce Russian units capable of waging battle and taking defence responsibility without Allied co-operation.

Acting on this policy, the Dvina River Force had, early in April, 1919, turned over to Russian troops the defence of the left bank of the river. These troops included artillery, infantry, engineers, medicals, and signallers and were completely Russian, except for a number of British infantry officers. The right bank of the river was held by Allied troops and Russian details in training.

This was the disposition of the force during April, 1919, and all seemed well, until at 5 a.m. on April 25 the Allied troops on the right bank were wakened by a fusilade of rifle fire, apparently from within the left bank position. It was immediately discovered that all communications with the left bank had been cut. Wireless communication had been established against such an emergency, but it also failed to answer signals, and the river ice was in such condition that crossing by foot or boat was well nigh impossible. Finally, however, a Russian artillery officer and three gunners negotiated the river by alternately rowing and pulling a boat over moving ice. They reported that the Russian infantry had mutinied, shot their officers, and gone over to the Bolsheviks, who had reinforced the mutineers and were laying siege to the loyal Russian artillery. It was impossible to cross the river in such force as to be of any real assistance, so an artillery barrage was laid down to the front and flanks of the affected position.

Some three and a half hours after the trouble had started, a message, signalled by lamp from the Russian artillery position, instructed the Allied forces how to direct assisting fire. Again an effort was made to send troops across the river, but again the condition of the ice blocked this move. At 9.30 a.m. a lamp message read, "Cannot hold out any longer, support withdrawal of guns" and, almost immediately after the necessary artillery fire had been supplied, the right bank forces were amazed to see the three guns of the Russian battery being withdrawn right through the lines of the encircling mutineers and Bolos. Although in print this incident may not seem remarkable, it must be realized that the withdrawal of these guns was accomplished amid a bedlam of attack and counter-attack and, though the Bolos and Russian traitors were uncertain as to the identity of friend or foe generally, it was perfectly clear that the Russian artillery were foes and to be treated as such by all factions.

Although the guns were saved, the position to which they were withdrawn was seven miles down the river and therefore in rear of the Allied position on the right bank. This, of course, weakened the whole river position and made the right bank defence extremely difficult. However, great credit is due to the River Force Commander, Lieutenant Colonel Montford, to the Navy, which assisted later, and to the Dvina River Force, because, when British Regular Forces arrived in June to take over, all lost ground had been regained, and the Bolo positions, in which all the trouble had started, had been rendered so unhealthy that the relieving forces slipped into the North Russian picture under comparatively satisfactory conditions.

In order to gain some impression of the activities of the other main river column, the Vaga Force, we must go back to the division of the force at the Vaga-Dvina junction in October, 1918. The small town of Beresnik, at the junction of the rivers, was selected as the Headquarters Base of the Dvina and Vaga Columns, and it was from this point that the Vaga River Force set out.

This column, about twelve hundred strong, was composed of one battery, Canadian Field Artillery, Prince Aristoff's Cossack squadron, a detail of Russian cavalry, a company of Allied infantry, a company of Russian infantry, and elements of a Russian field battery.

Although the Vaga River was not so important strategically as the Dvina, yet it formed a direct artery running almost due north and south, and was the only alternate highway over which troops, either Allied or Bolshevik, could operate. Therefore, if the Dvina is considered as the main theatre of operations, its flanks had to be taken care of. To the north and northwest there were trackless forest, muskeg, and wilderness right up to the Pole. To the south and southwest, were the Vaga River, the Emptsa River, and the Archangel-Vologda-Petrograd railway. I have already mentioned the forces operating on the railroad and on the Emptsa. There remains only the Vaga; and because the Vaga was next in importance to the Dvina and because, to control the Vaga, we had to push much farther afield than did the other forces, I shall have somewhat more to say about this phase of the North Russian adventure.

In October the Vaga Column pushed south from Beresnik some seventy-five versts (about fifty miles) to the town of Shenkursk, which had been held as an advance post by White Russians since early in the summer, and, using this town as a base, sought to consolidate and so control the river. With this end in view, a company of infantry, a battery of artillery, and necessary details, were pushed fifteen miles farther south on the river to Ust-Padenga, and systematic sorties or forays were made, radiating from Shenkursk along forest roads and up tributary rivers. This plan served to keep the force in touch with any opposition that might be gathering and at the same time gave the rapidly growing Bolshevik forces an exaggerated idea of our strength. The strategy was successful for almost two months, during which time the Vaga Column re-enacted as many of the G. A. Henty type of guerilla warfare stunts as could be remembered.

It was on one of these audacious forays that a close alliance was made between the 68th Battery, Canadian Artillery, and Prince Aristoff's Cossacks. It was at Aristoff's request that the operation was undertaken. We had reason to believe, from intelligence reports, that trouble was brewing in a village some ten miles to our south-east and, as the road to this village lay through the forest, with no places for rendezvous or defence until the village was reached, it was decided that the attack must be a whirlwind affair. Aristoff's Cossacks were the ideal people for the job, and he agreed to undertake it, provided he could have some artillery. He had long been hinting at a combined cavalry-artillery show, and here was the opportunity. So it was quickly arranged that two eighteen-pounder guns,

mounted on specially constructed runners, should accompany the Cossacks. Zero day was set and Captain Mowat, of the 68th Battery, was ready with his eighteen-pounders, and with a few more Lewis gunners than would normally accompany a section of guns. The Cossacks, however, were not ready and mystery surrounded their billets and horse-lines. Finally, Aristoff appeared at Column Headquarters, apologized for not being ready at zero hour on zero day, and explained that his preparations were not completed, but that he would be on the mark at the appointed hour the next day.

Shortly before dawn next day, the mystery of the delay was cleared up. The Cossacks appeared, every man equipped with a lance, from the tip of which flew ragged red pennants made out of bandana handkerchiefs or any other piece of red cloth. With a courtly salute to Captain Mowat, Prince Aristoff explained that the lances were a mark of special courtesy to the Canadian gunners, to remind them of their own Royal North West Mounted Police, and that he and his men felt honoured at being supported on an independent raid by the Canadian Artillery.

To relate the outstanding events of the raid may appear to introduce an anti-climax. But, in Russia, there must always be another climax after the anti-climax, so I think it is permissable to continue. I could not state the nature of wood used in the making of a cavalry lance, but I know that green spruce, balsam, and pine is not according to regulations. Or it may be that the length of a lance must vary in direct ratio to the weight or height of a horse. In any event, after a very impressive start, our brave (for courtesy R.N.W.M.P.) Cossacks soon developed unsteadiness in the ranks and seats. Girths slipped, mounts stumbled, Cossacks cursed, and before five miles had been covered nary a lance was left to pay homage to those other intrepid horsemen. And so, stripped again to their native war-likeness, the Cossacks advanced.

Coming to the scene of operations at last, the position was reconnoitred, the guns placed, the signal given, and the attack made. The village fell from fright, more than from rifle or gun fire, but it was well that the ammunition expenditure at the guns was light, for when the victorious Cossacks should have returned with prisoners and loot, there was no sign of them. Instead there issued from the village a very, very angry bunch of Bolos, intent on capturing the Canadian guns. But the extra Lewis guns and gunners, provided by virtue of some knowledge of Cossack psychology, frustrated this attempt, and Battery Sergt.-Major T. Tomkinson, D.C.M., brought this detachment back to Shenkursk, all safe and sound.

What of Aristoff and Company? They returned also—three days later—full of useless information and plausible explanations as to why they had considered it important to venture afield in search of more than their objective. In some of our more uncharitable moments, we attributed the return of the Cossacks to Aristoff's report that the Bolsheviks they had encountered had been "very poorly fed, indeed."

And now for the Russian climax to this incident—the Canadian Artillery officers (Mowat and myself) were tendered a banquet by the Cossack officers, in commemoration of the battle in which our forces had so gallantly co-operated. We were initiated into blood-brotherhood in the Cossack Mess and presented with complete Cossack uniform specially made for us. I was further honoured by the presentation by Aristoff of two beautiful blue-fox skins, and the festivities were still going on at 7 a.m. the next day when we left, not long before the climax.

It was regrettable that the question of the contents of Archangel's banks should have come up so soon after the cementing of Cosso-Canadski relations. And it was more regrettable that the man who commanded the Vaga Column at that time should have had so little appreciation of the niceties of a situation, but, when word was received from Archangel that Aristoff was suspected to be the bank thief 'par excellence', I was ordered to effect his arrest and delivery to Archangel. The other Russian troops couldn't arrest him for fear of his Cossacks. Headquarters seemed to have a lurking fear that force might be necessary. So had we for that matter. The Allied infantry was otherwise engaged in manning outposts, so we were elected.

On receipt of the order, we sat down and made plans; and the more we planned the greater became our confidence that success, without the use of force, lay in diplomacy and pomp. The development of pomp, three hundred miles in the interior of North Russia, with the thermometer ranging around thirty degrees below zero (F), was difficult, but we could at least try. So the ten best looking N.C.O's., with the ten best looking horses, were paraded before me the next morning. All their equipment had been burnished, fur caps had been swapped and re-swapped till uniformity and fit were as near perfect as possible. The battery sergeant-major was as resplendent as winter kit permitted, and

the two battery trumpeters were on hand with bugles, as well as trumpets, slung over their shoulders. When all had been inspected and approved, or corrected, Captain Mowat, glittering in all his own and as much borrowed magnificence as could be procured, took his place at the head of the escort. Armed with a letter, formal, diplomatic, and in our best French, which requested that Prince Aristoff grant an interview to Major Hyde, the party set forth on its quarter-mile trip to the Cossack Headquarters. Arrived there, the trumpeters blew a fanfare, the Cossack adjutant received Captain Mowat and escorted him to his O.C., Mowat delivered the letter and withdrew, his departure gaining dignity from a prodigious jangling of bit-chains and saddlery and a final self-conscious performance by the two trumpeters.

Scene two of this drama occurred some hours later, and it was more than a moment before we realized that it was a performance and not a ferocious attack on the Headquarters, Canadian Artillery. A terrifying noise was heard outside our quarters and, dashing to the door and windows with revolvers drawn, we beheld a display of pomp which far surpassed our earlier effort. The Cossack in all his glory is a striking spectacle. Multiply this by twenty and imagine whatever you do imagine when 'armed to the teeth' is part of the description, and you will have some idea of the spectacle that confronted us. I had no adjutant, and Mowat was already playing a rôle, so our third officer moved out onto the steps to receive the emissary of the Prince. A formal, polite, and hospitable letter, also in French, stated that Prince Aristoff would be honoured to receive me, at my pleasure, or at twelve noon the following day. That was that. Twelve noon was the fateful hour and pomp had to be out-pomped if the Canadian Artillery was to hold up its head, or perhaps even keep its head, in Cossack circles.

The night was spent in planning, shining, borrowing, and purloining, and when, after judicious fortification, I sallied forth to join my escort, my apprehensions over the success of my mission were somewhat allayed. The escort was thirty strong and, rather than describe their armament, it will be simpler to say that eighteen-pounders were not included. Instead of two trumpeters, with a spare bugle apiece, there were four blowers of trumpets and bugles. There were lances and pennants and a drum. I learned afterwards that some of the most warlike looking weapons were Very-light pistols, and a lot of the clink of arms or armour was produced by bit and trace chains hanging from the saddlery. However, the desired effect was obtained and the Cossacks honoured our arrival at their Headquarters by turning out a group of officers and a business-like looking guard. Mowat had accompanied me, as my escort was an "officer's party," and an officer had to remain on parade during my interview. A system of signals and a plan of campaign had been agreed upon between us in the event of trouble, but, in spite of all our careful preparations, I found it difficult to step jauntily through the guard of armed Cossack officers into the bank-robber's lair. However, my fears were groundless. No visiting ambassador or brother-brigand could have received a more courteous welcome and so, after felicitations had been exchanged and healths drunk to mutual satisfaction, the attending officers were dismissed, and the moment had arrived.

Doubting my ability to explain in French my unwelcome mission, I had brought with me the original order from G.H.Q. and had added to it, in longhand, a free French translation. This document I now produced and, rising, presented it to my host. He had come to attention when I rose and, standing thus, tall and distinguished and for all his sixty years straight as a ramrod, he accepted and read the order.

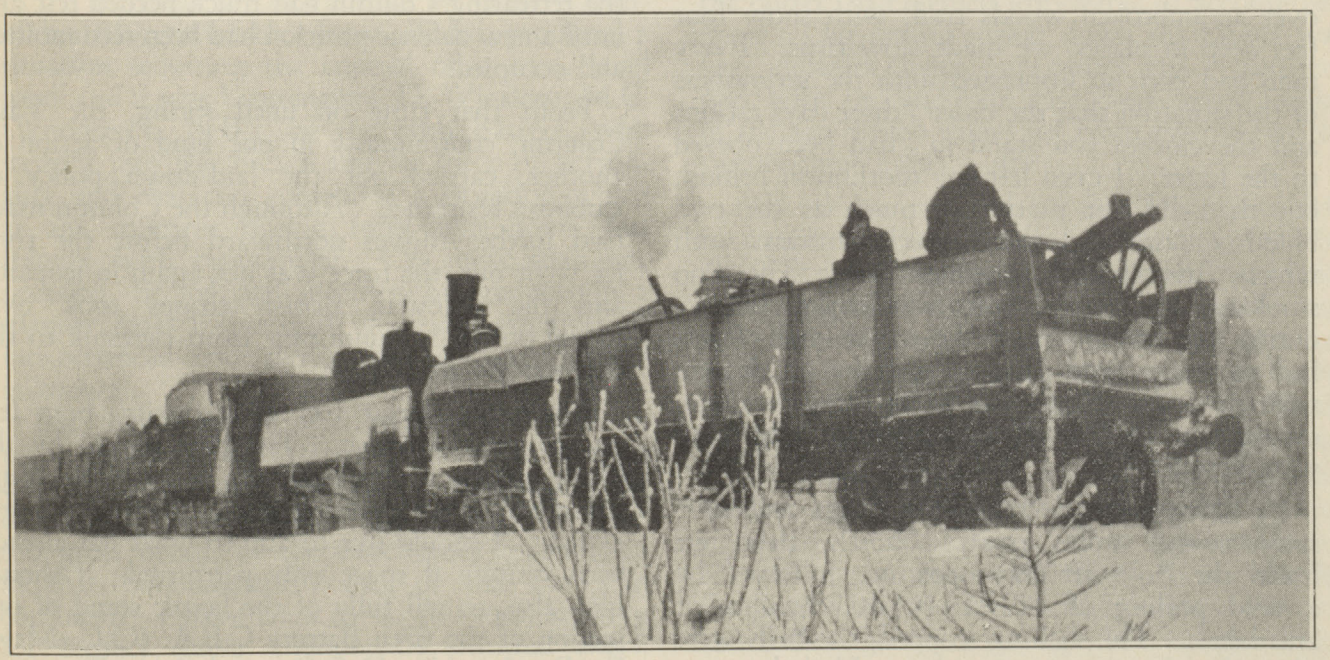
For only a moment longer than it took to read the order for his arrest, he stood motionless, then, quietly unbuckling his sword-belt, he bowed as he offered me his sword, hilt first, and expressed his willingness to place his person in my charge. Keeping up the tempo of the scene, although wilfully forgetting military law, I returned his sword, expressed my displeasure at the duty which I had been called upon to perform, and told him of the arrangements made for his trip to Archangel. He was visibly touched that Mowat was to be his guard (his whole treatment of Mowat during his guardship bore out this attitude), and, when I took my leave of him, thanked me most sincerely for the manner in which my people had dealt with him and for the consideration I had shown him. His only reference to his alleged crime was made just as I was leaving him, when he remarked with a twinkle in his eye, "If a great deal of money has disappeared from the Archangel banks, why should they suspect me? If they find me guilty, no prison in Russia will hold me, and the banks will be no better off." He was found guilty and imprisoned on an island in the White Sea. Less than two years later, he was in Southern Europe. How he got there, I have not been able to find out.

Towards the middle of January, our scouts and spies obtained confirmation of impending trouble. The Bolsheviks were gathering for their spring effort to push the Allies out of North Russia. The spearhead, geographically speaking, of the Allied advance was Ust-Padenga and Shenkursk. Believing that this area was lightly held and knowing that any advance down the Vaga would embarrass, if not cut off, the Dvina position, the Vaga Column was singled out for early attention. On January 19, 1919, Ust-Padenga was subjected to a determined attack and, though the garrison was able to stave off this attack and another the next day, it was clear that the Column could not withstand continued pressure on such isolated positions.

Therefore, on January 22, retirement on Shenkursk was ordered. Determined, well-disciplined troops could have carried out this operation without difficulty or much hazard, but, unfortunately, almost fifty per cent of the Column was composed of inexperienced troops, and from the outset difficulty was experienced. The garrison blundered back on Shenkursk, but got into such a precarious position within two miles of the town that a small force had to be spared from the defence of Shenkursk to cover the retirement.

It was in this support manoeuvre that Canada and the Canadian Artillery suffered a grievous loss. Captain Oliver A. Mowat, M.C., of the 68th Field Battery, the only available artillery officer, went out with a detachment and one gun to support the infantry during the action. His gun was heavily shelled and his detachment so weakened by casualties that he had to abandon his efforts to rally undisciplined troops. He returned to his gun and was severely wounded in the knee while personally firing the gun over open sights at the advancing Bolos. Fortunately, we were able to collect the wounded, retrieve the gun, and gather together all scattered remnants of the forward garrison. By nightfall our whole force was concentrated in Shenkursk, the Bolo was fifteen miles nearer his objective, and he would undoubtedly try to exploit his success.

I shall never forget the hours that followed. When we took stock of the situation, we found that our position was surrounded. Of thirteen roads radiating from Shenkursk, by 8 p.m on January 23, the enemy was in command of twelve. Of the five roads by which we might retreat toward our next defended position, thirty miles north, only one was open, and it had been neglected by the Bolo because it was considered impassable. We had 180 stretcher wounded in the local hospital and insufficient transport for them, to say nothing of teams for our guns. It was 25 degrees below zero (F), and we had received orders to evacuate the position that night. The town had a population of some 2,000 Russian civilians. How many were pro-Bolo and how many pro-Ally, we did not know. But we did know that if our intention to evacuate became known even an hour before we actually



AN ARMOURED TRAIN OF THE NORTH RUSSIAN EXPEDITIONARY FORCE, WINTER, 1919

In addition to fighting on land and afloat, gunners of the 16th Canadian Field Artillery Brigade in North Russia helped to man the Expedition's armoured trains. No. 1 Armoured Train, with a gun ready for action, is shown in the above photograph.

pulled out, our last exit would be closed and we would be swamped by the enemy. And to cheer us up, a Bolo patrol officer, captured just at dusk by our H.Q. cavalry, stated that the force against us was between twelve or thirteen thousand strong, whereas our column had dwindled to under eleven hundred, with two hundred odd wounded. There was only one thing to do—evacuate if possible—so, the decision and orders having been issued at 9.30 p.m. to as few officers as possible, we made our preparations for an evacuation at midnight. The wounded were our greatest responsibility, and known pro-Ally civilians came next, as far as the Column Headquarters was concerned. But to the Canadian gunners, their guns came next; and, as most of us had served in France, we were determined that if the Germans could not capture Canadian guns, certainly the Bolos could not.

How we planned that evacuation is still a horrible dream; suffice it to say the column pulled out of Shenkursk only one half hour later than scheduled, complete with ninety Russian peasant sleighs, with two stretcher cases from the hospital to a sleigh, and with the guns of the 68th Field Battery C.A. Our second-in-command, Captain Mowat, was in one sleigh, grievously wounded, and six of our men were also wounded. We had left three of our number buried in the church-yard, with wooden crosses marking the graves, and it is still a marvel that more did not fall that day.

Pressing silently through the bitter cold night over an unbroken woods trail, with snow four feet deep in places, we made slow time. Every man had been so impressed with the seriousness of the situation that the order "three days rations and the clothes you stand in" had been obeyed to the letter. I even left my toothbrush behind, but that did not matter so much as the two blue-fox skins and the Cossack uniform with which Aristoff had presented me. The "no smoking, no talking" order was hard to enforce during the first hours of the march and officers had to use a great deal of restraint in dealign with men who forgot the order for a moment, on account of the nervous pitch to which all were keyed.

By dawn we had crossed the Vaga and were some twelve miles away. Shortly after, we heard the Bolo artillery open up, followed by a wild pealing of bells from the churches of Shenkursk. The shelling stopped, the bells were silenced and suspense gripped us. Had the news of our departure reached the Bolo yet? Then more shelling, followed by another frenzied ringing of bells, and all the time we were moving north as fast as our jaded horses would permit. We judged that it was not till almost 10 o'clock on the morning of the 24th that our withdrawal from Shenkursk was realised by the enemy so, with nine hours' start, we felt fairly confident of being able to reach our next defended locality unmolested.

The relief at having won through to comparative security was not then appreciated in full by the 68th Battery, for Captain Mowat's condition had not been improved by the experience. At our first rest after dawn, we had built fires around his sleigh to permit the medical officer to dress his wound, and it was feared that gangrene had already set in. When we reached Shagovary, the next line of defence, late that afternoon, his condition was worse and, although better medical facilities were available there, it was necessary to send him with all speed to our nearest hospital, twenty miles further on. There, the affected leg was immediately amputated, but the terrific drain on vitality caused by exposure to sub-zero weather and the shock of the operation proved too much. He lost ground quickly, and Canada gave to a hopeless cause one of her most gallant sons.

At Shagovary we were met by the Commander of the Dvina Column, Colonel Montford, who had been borrowed to assist in the consolidation of the Vaga defences. He, with comparatively fresh lines-of-communication troops, took over the responsibilities of a rear-guard defence, until the retreating Column had much needed rest and until a new defence position had been reconnoitred and occupied.

From that time on until spring, the Vaga Column, continuously in one kind of action or another, carried out the laid-down policy of stubborn resistance. Although the Column made two further moves northward before the river ice went out, the force was not again in jeopardy and the relieving British troops took over strong positions equidistant from Beresnik to the defences on the Dvina.

Much of interest has, of necessity, been left out of this narrative. The part played by the Navy has been chronicled in *Blackwoods Magazine* and in an amusing book, *Bolos and Barysheyas*. I should like to add to what has already been written if space only permitted. I should like, also, to tell fully of the heroic stand of one section of the 67th Battery C.F.A. (O.C. Major F. F. Arnoldi, D.S.O. and bar—Toronto), under Lieutenant W. J. Bradshaw, when the section was surprised by Bolos, cut off, and



THE 68TH BATTERY, CANADIAN FIELD ARTILLERY, ON A 15-MILE MARCH FROM SHRED MAKRENGA TO SELETSKOE, NORTH RUSSIA, FEBRUARY, 1919

Runners to replace the gun-wheels had been made and tried not long before this photograph was taken, but the rough country proved too much for them and the staunch gun-wheels had been replaced.

surrounded. With guns back to back they won through, inflicting so many casualties on the force of six hundred who attacked that less than one hundred returned to the Bolo lines. Bradshaw's casualties were two killed and ten wounded. The fracas at Ust-Padenga on January 19th-20th, 1919, to which I have alluded, produced a situation requiring the control of a cool, level head; and it was Lieutenant J. D. Winslow, M.C. (Woodstock, N.B.), of the 68th Battery, who stepped into the breach and by force of personality and character controlled a situation which at any moment during forty-eight hours was fraught with catastrophe. On more than one occasion, he led and disposed his gunners in a manner that discouraged wholesale attempts of inexperienced associated troops to 'leave for parts unknown'.

But the object of this account has been to *place* the area of operations of the North Russian Expeditionary Force, to explain superficially the objects of the enterprise, and to tell, without too great detail, of the experiences encountered in that far northern corner of the European continent. I have tried to do this and, striving for brevity, have undoubtedly omitted much that should be included and, possibly, have included some irrelevant details. But memory fails and space is limited, so the narrative must end.

The end, for the Canadian participants, came early in June, 1919, when the British took over our positions. These we surrendered with mixed feelings, but predominant was gratitude that we had not all been sacrificed to a cause which, from the outset, had seemed impossible of accomplishment. Our return voyage down the Dvina was very different from our earlier trip. Summer was with us, and our days were spent lolling in the sun which shone for from twenty-two to twenty-three hours a day.

And so we returned to Archangel, and left it again the same night, forgetting for the moment the White Russian friends we had made, in our eagerness to find out, at first hand, what had happened in France during our absence. Archangel in October, with the temperature below zero, Archangel at eighty degrees in the shade in June, the Dvina, the Vaga, the Emptsa, Ust-Padenga, Shenkursk, names which had been greek to us all a year before. Now they all had significance and meaning. Their significance lay in their association with Allied tactics during the Great War 1914-1919; and fact that Canadians had found their last resting place on the shores of these rivers, or in the churchyards of some of these towns, gave to the names a meaning all too real.

Book Reviews

MARK TWAIN. By Stephen Leacock. London, Peter Davies, Limited, 1933. 5 shillings.

ALTHOUGH Mr. Painem, the biographer and literary executor of Mark Twain, told Bernard DeVoto that "nothing more need ever be written about Mark Twain," books on the subject continue to appear and to find a place for themselves. Certainly no other book Like Dr. Leacock's exists. Where else can one find such a compact but not too condensed account of Mark Twain's life and literary performances, with such sympathetic and appreciative comment on those portions of his work which seem destined to long life?

Dr. Leacock was unmistakably the man to write about Mark Twain. It is not merely because, as his publishers assure us, he is "the only living writer who rivals him in wit." It is also because, both by temperament and experience, he is able to see the world as Mark Twain himself saw it. His outlook is decidedly American, and he is entirely free from the confusion and perplexity which he tells us must have troubled many British readers in their solemn efforts to distinguish truth from fiction in Mark Twain. At the same time he is aloof enough to survey his author with calm, critical detachment.

Dr. Leacock does not consider all of Mark Twain's work important. In two places he gives a list of the indispensable books: *Innocents Abroad*, *Roughing It*, *Tom Sawyer*, *Huckleberry Finn*, *Life on the Mississippi*, and the *Connecticut Yankee*. The rest can be ignored. One can agree cordially with this and almost agree with the dictum, to which Dr. Leacock does not definitely commit himself, that *Huck Finn* is the "greatest book ever written in America." Only now are we finding out how far *Huck Finn* fell short of what Mark Twain would have liked it to be, and how much the prudery of his literary advisers compelled him to tone it down. One long ago suspected this. Imagine a Mississippi boatman saying, "Durn the durn fog!"

Save for a few pages at the beginning, Dr. Leacock makes no attempt to analyse Mark Twain's personality and literary work as a whole. Perhaps such an analysis would be out of place in the biographical series to which this book belongs. Nevertheless, one would be glad to know more fully what Dr. Leacock thinks about the controversy that has raged during the past dozen years, since the publication of Van Wyck Brooks' *Ordeal of Mark Twain*. He refers to this book once, and includes it in his bibliography.

Disputes can always arise over matters of detail. It may not be important, but one has considerable curiosity to know how Tom Hood managed to be among the distinguished writers who welcomed Mark to England in 1872. According to the standard books of reference, Tom Hood died twenty-seven years earlier. But he had a better claim to be there than Charles Kingsley.

Dr. Leacock's study of Mark Twain's early life is fascinating and he points out that "it was this youthful setting which enabled him to become what he was." Nothing that happened to him subsequently to the publication of *Innocents Abroad* was of any value to him as material. He became almost blind to the contemporary scene and continued to relive in his imagination and in his best literary work his early life on the Mississippi and in the far west. Nobody has brought this out with such emphasis as Dr. Leacock.—G. W. LATHAM (*Associate Professor of English, McGill University*).

CLIO MEDICA SERIES: VOLUME IX: MEDICINE IN CANADA. By William B. Howell, M.D., *Lecturer in Anaesthesia, McGill University*. Paul B. Hoeber Inc., New York; June, 1933; 127 pages, with illustrations, bibliography, and index. $1.50.

This little book is not a technical history of medicine; but is written as much for the layman as for the professional reader, in language which the layman understands. It opens with Jacques Cartier's men dying of scurvy, when all unknown to them the remedy to be found in spruce bark lay close at hand; continues through the period when barber-surgeons performed their menial offices in the land; continues further with illuminating comment on the work and personalities of those who established the bases of legitimate medical practice in Canada; and includes interesting details of the strange organizations which developed eventually into the medical faculties of McGill, the University of Toronto, and the University of Montreal.

Though surgery in Canada when the country was young is shown by the author to have been limited to "bleeding, pulling teeth, setting fractures, reducing dislocations, removal of superficial tumours, and cutting for stone" and though medical procedure knew "few theories of disease which did not postulate the letting of blood," competent nursing was provided in the Hôtel Dieu, Quebec (1639), and in the Hôtel Dieu, Montreal (1644), these hospitals thus antedating by more than a century the oldest hospitals in the United States. As Dr. Howell remarks, nothing in Canadian history is more inspiring than the courage and steadfastness of the nuns who kept these first hospitals in existence, and the details he submits furnish proof that this comment is in no way an exaggeration.

Turning to the first English-speaking practitioners in Canada, the author states that about them little is known. Of somewhat later physicians, he remarks "they were the cream of the human race," adding "we know this from reading their obituary notices," and commenting "there has been a deplorable deterioration in the medical profession since those days; or else journalists have a greater regard for the truth."

Describing conditions in the early days, Dr. Howell notes that one surgeon "was condemned to be hanged for forging a five-franc note." But, he adds, "for the honour of the Canadian medical profession it is gratifying to read that this sentence was commuted, and that nothing more serious befell him than to be stripped naked and beaten at a cross-roads by the public executioner, branded with a hot iron on the right shoulder, and sent back to France to spend the rest of his life as a galley slave."

The book is full of incident and the temptation to quote is strong, as in the instance of the quack American practitioners, described by a correspondent in the Kingston *Gazette* as "marauding anthropophagi," who descended

upon Ontario after the War of 1812. One of these was so ignorant of medical etiquette as to present a bill with a deduction of £6. 0. 0. "for killing your son," but, fortunately for Ontario, a preponderance in her medical population of practitioners from accredited institutions in the British Isles meant that the plague of charlatans was eventually eliminated.

There are in the book short biographical chapters on James Douglas (1800-1886), who first established humane treatment of the insane, John Rolph, John Christian Schultz, Archibald Menzies, William Fraser Tolmie, and John Sebastian Helmcken. The excellence of the technique in the handling briefly of the stories of these men's lives and adventures inspires the hope that from the same pen a work dealing with outstanding Canadian medical personalities and achievements in more recent times may be expected.—R. C. F.

NORTHERN LIGHTS: THE OFFICIAL ACCOUNT OF THE BRITISH ARCTIC AIR ROUTE EXPEDITION, 1930-1931. By F. Spencer Chapman. Chatto & Windus, London, 1932; 304 pages, with appendices, illustrations, and maps. 18 shillings.

Something of the romance that used to attach to Arctic exploration and something of the amateur spirit of the gentlemen adventurers of the past, lost often in recent years through too much organized professionalism and syndicated publicity, returned with the British Arctic Air Route Expedition of 1931-1932, and the same spirit appears in this official account of the Expedition's work. The leader, Henry George Watkins, who died in the following year in Labrador, was only twenty-five years of age. Some of the men who served under him were little older; and several of them had no experience of Arctic exploration at all. Yet so highly was the group regarded that the Prince of Wales accepted nomination as President of the Organizing Body, the Royal Geographical Society provided financial aid, the Air Ministry, the War Office, and the Admiralty lent instruments and personnel, and the Danish Government afforded assistance.

Without going into detail, it may be said that the Expedition's objectives were to study meteorological and other conditions in Greenland, to map sections of the coast, to establish and maintain an observation station on the Greenland Ice Cap, to make long dog-sled journeys into the interior, to carry out airplane observations, and generally to enquire into many factors that would affect the establishment in the future of a practical air route from Europe and the British Isles to Canada and the heart of the North American Continent.

The tale of how some of these objectives were attained and others found unattainable is almost as inspiring as the immortal tale of Scott's journey to the South Pole. There is not, fortunately, the same tragic ending, nor perhaps, in the aggregate, the same degree of hardship and suffering, but there are in abundance the same willingness to face privation and death, the same urge to accept risks when these stood between the members of the party and their objectives, and, above all, the same quiet enthusiasm—seldom admitted in so many words—for work which all believed to be in the service of Great Britain and the Empire.

From the public's point of view, though not necessarily from the point of view of valuable accomplishment, no part of the book is more inspiring than the tale of Augustine Courtauld's long and lonely vigil in the station on the Greenland Ice Cap. Months passed before his relief could be effected; and there is drama in the story of how he was found at last buried deep in his station under many feet of snow. The photographs covering this phase of the party's activities are striking, indeed all the numerous plates are good and add much to the interest of a well written and eminently readable volume, describing a venture destined, it seems clear, to hold for a long time a notable place in the history of British Arctic exploration.—R. C. F.

CANADIEN: A STUDY OF THE FRENCH-CANADIANS. By Col. Wilfrid Bovey, *Director of the Department of Extra-Mural Relations, McGill University.*

Publication of this volume, which was reviewed from proof in the March issue of *The McGill News* and appearance of which at that time was believed to be imminent, was unexpectedly delayed. It is now believed that copies will be available by the time this issue of *The News* is distributed.

CONVOCATION

Marked by an announcement that the School for Graduate Nurses would be continued, at least for another year, Little Convocation was held in Moyse Hall on the morning of Tuesday, May 23. Nearly fifty diplomas were presented on this occasion, including 33 in the School for Graduate Nurses, 10 in the School of Physical Education, 3 in the Faculty of Music, and one in the Department of Pharmacy.

At the University Convocation, held in Loew's Theatre on May 25, honorary LL.D. degrees were conferred upon His Eminence, Cardinal Jean Marie Rodrigue Villeneuve, fourth Canadian to be elected to the Cardinalate of the Roman Catholic Church; the Hon. Vincent Massey, who delivered the Convocation address; Dr. Henry A. Lafleur, Emeritus Professor of Medicine in McGill University; Dr. W. W. Chipman, a member of the Board of Governors of the University and Emeritus Professor of Gynaecology and Obstetrics; and John Alexander Dresser, a graduate of the University and Director of the Division of Geology of the Province of Quebec Bureau of Mines.

In addition to the honorary degrees, some 500 students graduated, the number in the different faculties and schools being: Arts 124, Medicine 83, Engineering 65, Commerce 41, Master of Science 26, Master of Arts 29, Doctor of Philosophy 27, Bachelor of Science 25, Bachelor of Science in Agriculture 17, Bachelor of Civil Law 14, Bachelor of Architecture 1:, Bachelor of Library Science 10, Master of Engineering 8, Bachelor of Household Science 6, Doctor of Dental Surgery 6, and Master of Commerce 2. Professor George W. Scarth, for many years a member of the Department of Botany, received the degree of D.Sc.

Athletics

Soon after the March issue of *The McGill News* went to press, the University's athletic season ended. McGill won 7 intercollegiate championships in the year—basketball, English rugby, harriers, hockey, swimming, tennis, and track and field—and the University of Toronto won 6. The University of Montreal captured the golfing honours and Dartmouth won the international title in skiing and winter sports. Somewhat unexpectedly, McGill's basketball team which had conclusively defeated Toronto, Queen's and the University of Western Ontario, was called upon to withstand a challenge from McMaster University for the Canadian intercollegiate title. McMaster travelled to Montreal and played a courageous game, but McGill's strong squad held the situation well in hand and won by 44-32.

In addition to basketball, the post-regular season period was marked by notable indoor track events. In the first of these, on March 19, McGill travelled to Boston and defeated Boston University by $42\frac{2}{3}$ to $34\frac{1}{3}$. This was the first occasion on which the two universities had met in an athletic contest, but it is hoped that further athletic relations will follow.

After the events in Boston, a McGill squad proceeded to Toronto, where, in an international event, Phil Edwards captured the 1,000 yards, and on to Hamilton, where, in a mile and a half relay, run in 5 minutes, 49 seconds, McGill defeated McMaster University and the University of Toronto. This event brought the University's season of intercollegiate sport to an end.

PRIVILEGES FOR MEMBERS OF THE SOCIETY

The Executive Committee of the Society and the Executive Council of the Montreal Branch Society have agreed on a policy of developing for members in good standing privileges in connection with University activities in which graduates are interested.

Recently the Athletic Board has been approached and has agreed to allow members of the Society a special price for season tickets at the McTavish Street tennis courts of $10.00, non-member graduates' fees are $12.00, and non-graduates' fees are $15.00. It has also been arranged with the Athletic Board that a section will gradually be built up at the Stadium consisting of those football season-ticket holders who are also members of the Society. It is hoped that in time there will be a characteristic group of members of the Society to be found in increasing numbers in this section of the Stadium.

Alumnae Notes

MISS HURLBATT expects to return to Montreal in the early summer.

DR. MARGARET M. CAMERON, Arts '16, of the University of Saskatchewan, has been spending her sabbatical year in studies in Paris. She was joined there recently by her sister, Miss Betty Cameron, Arts '24, and they will visit Spain together before returning to Canada.

MISS ZERADA SLACK, past president of the McGill Alumnae Society, is spending the summer in Europe.

MISS SADIE ORGAN, Arts '31, has been appointed Assistant Lecturer in Mathematics and Librarian of Memorial College, St. John's, Newfoundland, from which institution she graduated in 1929, with the Jubilee Scholarship, afterwards entering McGill to complete her Arts course, with honours in mathematics and physics.

MISS RUTH DOW, Arts '29, completed her medical course at McGill this season, winning the Holmes Gold Medal for the highest aggregate in all subjects of the medical curriculum. She expects to go abroad for post-graduate study.

MRS. DOUGLAS THOM, of Regina, President of the Canadian Federation of University Women, visited Montreal in May, addressed a special meeting of the McGill Alumnae in the Royal Victoria College, and was afterwards guest of honour at a reception. Special guests for the occasion included the alumnae of other universities, now resident in Montreal. Mrs. Gordon St. G. Sproule, President of the McGill Alumnae, was in the chair. The speaker was introduced by Mrs. Walter Vaughan, a past president of the Canadian Federation. The vote of thanks was moved by Miss Winifred Kydd.

VANCOUVER NOTES

McGILL GRADUATES in Vancouver, and their friends, enjoyed their annual reunion in January at the Point Grey Golf Club, when the McGill Women's Club entertained at a bridge and dance. A huge red-and-white banner over the fireplace gave the proper McGill atmosphere, and, during the dancing, everyone joined in college songs and yells, including the R.V.C. yell, which has become very popular.

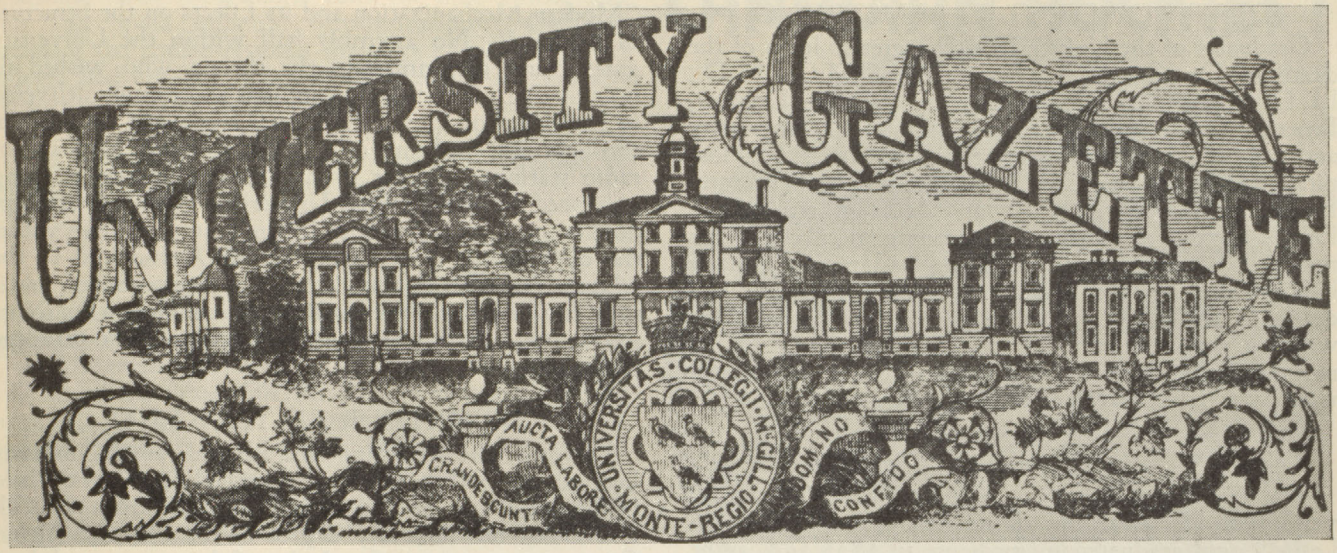
The McGill Women Graduates' Society of Vancouver, at the March meeting, were addressed by Miss M. Dorothy Mawdsley, Arts '20. Her subject was the Huntington Library at Los Angeles.

At the April meeting at the home of Mrs. Shearer, Mrs. George Edwards gave personal reminiscences of childhood days spent at Ruskin's home and read several letters from "The Professor," as he was always called by them, giving an intimate glimpse of the human side of the great man.

On May 8th, the final meeting for the year of the McGill Women Graduates took the form of an address and musicale at the home of the President, Mrs. Jessie Buck. Mr. Rhynd Jamieson, music critic of the "Vancouver Province," spoke on "Lutenist, Romantic and Modern Composers." His remarks were illustrated by songs of the Elizabethan era, some of Schubert and Schumann, closing with the work of the modern composers, Healey Willan and John Ireland.

The assisting artist was Mrs. Verna Jessen, accompanied by Miss Edna Rogers, who added greatly to the pleasure afforded by the speaker. McGill Graduates present were: Mrs. Jessie Buck, Mrs. Gordon Raphael, Mrs. H. S. Wilson, Mrs. Clarence Ryan, Miss Kate McQueen, Mrs. J. W. Southin, Miss Cora Brehaut, Miss Alice Keenleyside, Mrs. Earle Kirkpatrick, Miss Margaret McNiven, Mrs. W. K. Beech, and Mrs. Gordon Scott.

On Tuesday, May 9th, Doctor L. H. McKim, Demonstrator in Surgery, addressed the Hastings and Prince Edward Counties Medical Society in the Hotel Quinte, Belleville, on "Fractures Involving the Ankle Joint." This lecture was illustrated by lantern slides. On Thursday, June 1st, Doctor McKim lectured before the Canadian Ambulance Club in the Macdonald Chemistry Building, on "The Glandular System."



McGILL IN 1877

This interesting heading, from the *University Gazette* of December 15, 1877, was forwarded to *The McGill News* by A. B. Chaffee, President of the International Railway Publishing Company, whose name appears on the *Gazette's* Editorial Board. Others on the Board in 1877 were: J. N. Greenshields, Breadalbane C. MacLean, J. McKinley, F. W. Shaw, H. B. Small, T. A. O'Callaghan, J. C. McCorkill, and F. Weir.

A McGill Conspectus

February—June, 1933

(WHEREIN *The McGill News* PRESENTS IN CONDENSED FORM SOME DETAILS OF THE UNIVERSITY'S RECENT ACTIVITIES AND ACCOMPLISHMENTS)

NEUROLOGY INSTITUTE CONTRACTS

Award of contracts for the construction of the new Neurological Institute, made possible by a gift of $1,232,652 from the Rockefeller Institute and by generous donations from the Province of Quebec, the City of Montreal, J. W. McConnell, Esq., Walter Stewart, Esq., and Sir Herbert Holt, was announced by the University on May 13. E. G. M. Cape and Company are the general contractors. Construction, it was announced, would start at once and the building will be completed by the early spring of 1934.

SURGICAL TREATMENT OF EPILEPSY

In a paper delivered to the American College of Physicians this winter, Dr. Wilder G. Penfield, Director of the University's new Neurological Institute, described the notable work now being conducted in the Royal Victoria Hospital in the surgical treatment of epilepsy. Epilepsy, Dr. Penfield stated, is not a disease, but a symptom of many different pathological conditions which may effect the brain. His report, which covered 43 cases treated by himself and his chief assistant, Dr. W. V. Cone, served to emphasize the position which McGill is attaining as a centre for the North American Continent in neurology and neurosurgery. Impetus to this movement will be provided by the new Neurological Institute, construction of which, though delayed, is now under way.

NEUROLOGICAL INSTITUTE

In an address to the Electrical Club of Montreal on March 22, Dean C. F. Martin, of the Faculty of Medicine, explained the great advantages that would accrue to Canada and McGill through the establishment of the University's Neurological Institute in connection with the Royal Victoria Hospital. Neurological work had been intensively developed in Europe, Dr. Martin said, but in North America provision for adequate study, research, and treatment had not yet been afforded. The new Institute, therefore, would fill a definite need and would, in Dr. Martin's opinion, be a source of added prestige to the Medical Faculty of the University.

GIFTS TO BIOCHEMISTRY DEPARTMENT

Recognition of the notable research work in biochemistry being carried out at McGill by Dr. J. B. Collip and his associates was recently accorded by the Hon. Vincent Massey, who called at the University and expressed the wish to aid the work by a donation of $10,000. The Governors gratefully accepted this generous offer at a meeting of the Board on April 19, and simultaneously announced a further anonymous gift of $5,000 to be devoted to the same department. In offering his donation, Mr. Massey explained that, from medical friends in the United States, he had learned of Dr. Collip's work, which had been referred to as among the outstandingly successful research labours of the present year.

DEATH OF DR. G. E. ARMSTRONG

Graduates of the University will regret to learn of the death of Dr. George E. Armstrong, C.M.G., M.D., LL.D. (Queen's), D.Sc. (Liverpool), M.Ch. (Dublin), Emeritus Professor of Surgery in McGill University and former Chief Surgeon of the Royal Victoria Hospital, Montreal, which occurred in the Royal Victoria Hospital on May 25, after an illness of ten weeks. Dr. Armstrong was one of the leading members of the medical profession in Canada and had received many honours here, in the United States, and abroad. His death, in his 79th year, removes a figure whose memory will for years to come be gratefully preserved in the records of the University and those of the great hospital with which he was for so long connected.

CENTENARY OF FIRST DEGREE

The University this year celebrates the 100th anniversary of the awarding of its first degree. William Leslie Logie graduated in medicine in 1833 and, as he was the only graduate in that year, his place in the University's history is unique. In the following years other students graduated in medicine, but it was not until 1849 that Alexander Morris, later the Hon. Alexander Morris, M.A., D.C.L., graduated in Arts. Five students graduated in Law in 1850.

BUSTEED SCHOLARSHIP

Dean P. E. Corbett, of the Faculty of Law, announced in April that a new scholarship, to be known as the Edward Botsford Busteed Scholarship, to the value of $300 is to be awarded this year to a graduating student interested in spending some time in research work in law. Provision for the scholarship was made in the will of the late Mrs. Busteed and the bequest now becomes operative for the first time.

DR. C. E. FRYER PROMOTED

In succession to the late Dr. W. T. Waugh, Professor C. E. Fryer has been appointed Chairman of the University's Department of History. Professor Fryer graduated from the University of California in 1901, took his M.A. and Ph.D. at Harvard, and joined the McGill staff in 1906. At the University he has won the esteem of colleagues and students and his appointment is recognized both as popular and abundantly deserved.

FRENCH SUMMER SCHOOL

The McGill French Summer School, which from its striking success in recent years has become recognized as one of the University's most important extra-sessional activities, will be held this year from June 26 to July 29, under the direction of Professor Réné du Roure. Students from all parts of North America have enrolled and for five weeks will live in an atmosphere exclusively French. The headquarters of the School will be in the Royal Victoria College. There will be three courses, designed to meet the needs of students familiar or unfamiliar with the French language, and a programme of great variety and value has been planned.

THE MASSEY LECTURE

Under the auspices of the Massey Foundation, established through the generosity of the Massey family, of Toronto, Sir Arthur Salter, noted British economist, visited Montreal in April to lecture at McGill on "Modern Mechanization and its Effects on the Structure of Society." No assembly hall within the University gates could accommodate the throng who wished to hear Sir Arthur and the lecture was accordingly delivered in the Windsor Hotel, additional thousands listening-in through the medium of a coast-to-coast hook-up of radio stations. As Sir Arthur Salter's address is being published by the Oxford University Press, no attempt need be made to summarize it here, but *The News* values the opportunity of repeating to Sir Arthur and to the Massey Foundation the Principal's expression of gratitude for an address that will long remain as a source of intellectual satisfaction to all who enjoyed the privilege of hearing it.

SIR ARTHUR SALTER'S LL.D.

Previous to delivering the second annual Massey Lecture, Sir Arthur Salter, at a special convocation held in Moyse Hall on April 18, received from McGill University the honorary degree of LL.D. Sir Arthur Currie, in presenting Sir Arthur Salter as a candidate, referred to him, in part, as a statesman, a leader of men, a devoted servant of his nation, and one who, when called repeatedly to gigantic tasks, had performed them with honour to himself and dignity to his countrymen. The Chancellor of the University then conferred the degree, which Sir Arthur acknowledged with a brief plea on behalf of the world's practical economists and a warm expression of his gratification in the honour McGill had granted him.

PROFESSOR COUPLAND'S ADDRESS

In an inspiring address in Moyse Hall on the night of April 19, Dr. Reginald Coupland, Vice-Professor of Colonial History in Oxford University, expressed boundless faith in the future of the British Empire and a belief, despite the strained relations of the present and the past, that Ireland and Great Britain would one day find complete reconciliation. Professor Coupland's speech was marked by oratory and eloquence of a high order, and his character sketches of Cosgrave, De Valera, and others prominent in the recent history of Ireland were illuminating. Professor Coupland received an ovation when his speech ended and his hearers were unanimous in declaring his address to be one of the most fascinating heard in years.

LIBRARY SCHOOL IN P.E.I.

The McGill University Library School will this year conduct a summer school at the Prince of Wales College, Charlottetown, P.E.I., from July 3 to July 29. The course will be under the patronage of Dr. W. J. P. MacMillan, Minister of Education for P.E.I.; S. A. Robertson, M.A., LL.D., Principal, Prince of Wales College; Rev. J. A. Murphy, B.A., D.D., Rector, St. Dunstan's University, and of Sir Arthur Currie. Special illustrated lectures, open to the public, will be given in the evenings by Dr. G. R. Lomer, McGill University Librarian, and by Col. Wilfrid Bovey, Director of the University's Department of Extra-Mural Relations.

SUMMER MUSEUM COURSE

A bilingual (French and English) summer course in general museum technique will be given at the University from June 26 to June 30, under the direction of E. Lionel Judah, Curator of the University Museums, and under the auspices of the Department of Extra-Mural

Relations. The programme calls for nine 1-hour lectures and seven museum demonstrations. Circulars regarding the course resulted in many enquiries and 15 students had enrolled when news of the plan was announced in April in the Montreal press. A noted group of lecturers will take part in delivering the course and marked benefit to museum work in the Province of Quebec is confidently expected to result.

EMERITUS PROFESSOR OF PHYSICS

The appointment of Dr. Howard T. Barnes, at one time Director of the Department of Physics, as Emeritus Professor of Physics was announced by the Governors of the University in April. Dr. Barnes, who has been in ill health for some time, has long been known for his outstanding work in ice engineering. In this field he conducted research of a brilliant and original order and it is gratifying to know that his two sons, Dr. W. H. Barnes, at McGill, and Thomas Barnes, at Harvard, are following up the work in which he was a pioneer.

DR. W. F. HAMILTON RESIGNS

Dr. W. F. Hamilton, whose teaching connection with McGill has lasted since 1895, has resigned his position as Professor of Medicine on the University staff and, at a meeting of the Governing Board on April 19, was appointed Emeritus Professor in the same department. Though severing his active connection with the University's teaching staff, Dr. Hamilton is continuing his private practice and his service in the public and private wards of the Royal Victoria Hospital. The position he holds in the regard of professional colleagues and of the public of Montreal and the Dominion means that his services could ill be spared, and news that his practice will not be affected by his resignation has been received with widespread satisfaction.

R.V.C. RATES REDUCED

A reduction from $500 to $450 in the board and residence fees in the Royal Victoria College, to become effective at the opening of the autumn session, was announced by the University in May. Accommodation for more than 100 women students is now available and University authorities desire that as many parents as possible should be enabled to maintain their daughters in residence rather than in boarding houses.

COMMERCE FEES REDUCED

Following a meeting of the Board of Governors on April 19, it was announced that, for the coming session, fees in the School of Commerce would be reduced from $225 to $200. It was the opinion of the Board that the existing fee was too high when compared with the fees in other courses and the reduction was authorized accordingly.

ROYAL EDWARD INSTITUTE

Formal ratification of the plan to affiliate the Royal Edward Institute, Montreal, with McGill University was announced by the University's Governors on April 19. In granting affiliation, the University appointed a Medical Board for the Institute composed of Dr. C. F. Martin, Dr. J. C. Meakins, Dr. C. P. Howard, Dr. L. J. Rhea, Dr. E. W. Archibald, and Dr. E. S. Harding. An interesting article by Dr. Harding on the work and history of the Institute appears in this issue of *The News*.

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4 Colorful Days—1 day Banff Springs Hotel. 2 at Chateau Lake Louise, 1 at Emerald Lake Chalet. 126 miles of motoring, including side trip to Moraine Lake. From Emerald Lake motor to Field for train. Reverse trip Eastbound. ALL-EXPENSE $50

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Low Summer Round Trip Rail Fares to Banff, North. Pacific Coast, California, Alaska.

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M.Sc. IN HORTICULTURE

A new degree, Master of Science in Horticulture, was authorized by the University Corporation in April. The degree will be awarded in the Faculty of Graduate Studies and Research and candidates will study at Macdonald College, under Professor T. G. Bunting, Professor of Horticulture, and in the Department of Botany at McGill, under Professors F. E. Lloyd and G. W. Scarth.

PARASITOLOGY DEGREES

Following a meeting of the University Corporation in March, it was announced that courses leading to the degrees of M.Sc. and Ph.D. in Parasitology had been established in connection with the McGill University Institute of Parasitology at Macdonald College. This Institute and its remarkable work were described by the Institute's director, Professor T. W. M. Cameron, in the March issue of *The McGill News*.

POWERFUL X-RAY TUBE

At a recent meeting of the Electrical Club of Montreal in the Queen's Hotel, Oliver Ajer, of the Research Laboratories, General Electric Company, Schenectady, N.Y., described a new x-ray tube under construction for the Montreal General Hospital. Rays from the new tube, Mr. Ajer explained, could penetrate four and a half inches of steel and would have the penetrating power of $200,000,000 worth of radium. The overall length of the tube is 17 feet and it requires a current 8,000 times greater than that used in ordinary house circuits. Only one other tube of similar power is believed to be in general use. The purpose of the tube is to provide deeply penetrating rays for the treatment of cancer.

GRADUATES' SOCIETY BROADCASTS

Letters from many graduates in Canada and the United States have expressed appreciation of the Graduates' Society's radio broadcasts, which were inaugurated in October and continued twice a week until March 31 of the present year. In all 46 brief lectures and speeches were delivered over Station CKAC and reception of these was reported from as far south as Washington, as far north as the Arctic Circle, as far west as the border of Manitoba, and as far east as Newfoundland. The whole series was carried through without cost to the Society, under the direction of G. McL. Pitts, President of the Montreal Branch.

GRADUATES' EMPLOYMENT BUREAU

In a report for the quarter year ending March 31, 1933, the Director of the Graduates' Society Employment Bureau records the placement in permanent positions of 6 men and 3 women, with 2 men and 5 women placed in temporary positions. Of the eight men placed, 2 were chemical engineers, 1 was a mechanical engineer, 2 were electrical engineers, 1 was a commerce graduate, 1 was a graduate in law, and 1 was a non-graduate. The total placement of men and women, though lower than in the previous quarter year, was almost double the placement in the corresponding period last year. In all 631 men and 248 women are registered on the Bureau's rolls. The address of the Bureau is: McGill University, Montreal.

DELTA UPSILON SCHOLARSHIP

The McGill Delta Upsilon Memorial Scholarship, to the value of $900, has this year been awarded to R. A. Chipman, who graduated from the University of Manitoba in electrical engineering in 1932 and continued his studies this year at McGill. He is engaged in an investigation of the mechanism of electron oscillations in vacuum tubes. The Scholarship he has gained was founded by the McGill Chapter of the Delta Upsilon Fraternity in memory of members who gave their lives in the Great War.

SUMMER MEDICAL COURSES

Special 10-week summer courses covering regular clinical work in medicine and surgery are being given by the McGill Medical Faculty this year. These courses are for medical students in their second, third, and fourth years. The courses do not carry credit towards a degree, but will, it is believed, prove of great value in helping students in the mastery of the subjects concerned when regular sessional work is resumed in the fall.

EXTRA-MURAL LECTURES

A record of 100 lantern lectures, with a total attendance of 7,456, was established in Montreal by the Department of Extra-Mural Relations in the six months from November, 1932, to April, 1933. Almost as many similar lectures were delivered in towns in Ontario, New Brunswick, and Quebec. In order that clubs and societies may plan their winter series of lectures, the Department this year has issued its programme of lyceum and illustrated lectures in advance. The list includes lectures by many of the most prominent members of the University staff, with a variety of subjects covering nearly all aspects of the University's curriculum.

CHROMOSOMES EXPLAINED

Under the auspices of the Sigma XI Society, Dr. Curt Stern, Professor of Genetics at the University of Munich, lectured in the McGill Biological Building in March. Choosing as his subject "The Physical Basis of Inheritance: The Constitution of the Chromosomes," Dr. Stern explained how experiments had established that hereditary characteristics are transmitted through an interchange of paternal and maternal chromosomes. Professor W. G. McBride presided at the meeting and a vote of thanks to Dr. Stern was proposed by Dr. C. L. Huskins, Professor of Genetics at McGill.

OLD RECORDS DONATED

Old correspondence and records of Montreal bearing dates of approximately seventy years ago have been donated to the McCord Museum by Fred. J. Claxton, Esq., of San Francisco. Mr. Claxton read the Museum's appeal for data of this nature in the columns of the Montreal *Gazette* and, realizing that many of the letters in his possession would shed light upon University and civic affairs of more than a half century ago, generously forwarded the material to the McCord Museum authorities.

McCORD MUSEUM REPORT

The growing importance of the McCord National Museum in the eyes of Montreal citizens and strangers is strikingly revealed by attendance figures for the winter months which show a total of 10,289 visitors, compared with 5,152 in the previous year. Attendance by

classes of school children accounted in part for the increased figures, but general public attendance also rose substantially. Evidence of interest in the Museum and its work was also furnished by many friends who contributed generously to its fine historical collections.

AMERICAN STUDENT STATISTICS

The popularity of McGill's medical course among students from the United States is attested to in the final report of the American Commission on Medical Education. In 1931-'32, 308 American students are shown as studying in Canada; 207 of these were at McGill, 2 were at the University of Toronto, 25 at Dalhousie, 14 at Laval, 14 at Queen's, 27 at the University of Montreal, 2 at Manitoba, 4 at Saskatchewan, and 13 at the University of Western Ontario. Canada, the report shows, is the most popular country for American students who wish to study outside the United States, Scotland coming next, with Switzerland, Austria, Germany and Italy following in order.

FINAL REGISTRATION FIGURES

Final figures of registration at the University for the year now ended, including students in the faculties, schools, partial courses, and extension courses, show a total of 3,696, a decrease of 107 from the previous year. The loss was entirely in the diploma courses, as in the courses leading to a degree the total increased by 43 from 2,715 to 2,758. There were 2,621 men and 1,075 women registrants.

CHICAGO FAIR EXHIBIT

McGill men and others who visit the Chicago World's Fair this summer will find in the Universities' Building a fine exhibit from the Medical Faculty. A panoramic view of McGill will be in the centre, flanked by pictures of the Osler Library and by exhibits demonstrating the progress of medical teaching in the University and the hospitals of Montreal. Photographs of noted McGill physicians and surgeons of the past, including Sir William Osler, Dr. W. G. Johnston, Dr. Frank Buller, Sir Thomas Roddick, Dr. F. J. Shepherd, and Dr. J. G. Adami, will also be included.

POLISH HONOURS

The Government of Poland announced in May that it had bestowed the Polish Golden Cross for Merit upon Dr. William Caldwell, Emeritus Professor of Moral Philosophy in McGill University. Previously, in 1926, the Polish Government had bestowed on Professor Caldwell a Knight Commandership in the Order of Restored Poland. Both honours were in recognition of services in the cause of Poland in Canada and abroad.

LEAD POISONING IN CHILDREN

Lead poisoning of children through the sucking of paint from pencils and toys has been the subject of an investigation at the Children's Memorial Hospital, Montreal, and the results have proved instructive. Sixteen cases formed the basis for a recent report, which indicated that cheap pencils and cheap toys were sometimes a source of danger. There was no evidence to indicate that the menace was increasing, and research showed that most paints on household furniture and the more expensive toys were devoid of lead ingredients.

(Continued on Page 59)

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Personals

THE McGILL NEWS welcomes items for inclusion in these columns. Press clippings or other notices should be addressed to H. R. Morgan, Esq., The Recorder Printing Company, Brockville, Ontario; or to the Executive Secretary, Graduates' Society, McGill University, Montreal. Notices for the September issue should be forwarded prior to August 15th.

MISS RUTH DOW, Arts '29, Med. '33, was this year the winner of the Holmes Gold Medal for the highest aggregate in Medicine in the final year.

Dr. A. S. LAMB, Med. '17, Director of the University's Department of Physical Education, has been elected a Fellow of the Society of Physical Education of America. He is the only Canadian upon whom this honour has been conferred.

Dr. A. S. EVE, M.A. '08, D.Sc. '08, Dean of the Faculty of Graduate Studies and Research and Director of the Department of Physics, has been awarded an honorary LL.D. degree by Queen's University.

GEORGE V. V. NICHOLLS, Arts '29, Law '32, holder of the Macdonald Travelling Scholarship in Law for 1932, has been attending the University of Dijon, France, but is now in Montpellier, where he will study until the end of the University term.

Dr. FREDERICK M. BECKET, B.A.Sc. '95, President of the American Electrochemical Society in 1925, has this year been appointed President of the American Institute of Mining and Metallurgical Engineers.

H. F. MOSELEY, Arts '27, B.A., M.B., C.H.B. (Oxon.), M.R.C.S., L.R.C.P., has been awarded the Mead Medal for 1933, the highest award in medicine conferred annually by St. Thomas's Hospital, London.

PROFESSOR A. G. HATCHER, Arts '09, has been appointed President of the Memorial University College of Newfoundland. Professor Hatcher is a brother of Dr. W. H. Hatcher, F.R.S.C., Arts '16, M.Sc. '17, Ph.D. '21, Associate Professor of Chemistry at McGill, and of H. Gordon Hatcher, M.A., Arts '12, a member of the University Corporation and Superintendent of Protestant Schools for Lachine.

Dr. FRANK D. ADAMS, Emeritus Vice-Principal of McGill University and Emeritus Dean of the Faculty of Graduate Studies and Research, will represent the National Research Council of Canada at the International Geological Congress in Washington in July.

Dr. JOHN A. NESS, Vet. Sci. '96, of Auburn, Maine, was among the outstanding Farmers and Homemakers honoured by a special programme of recognition sponsored at the University of Maine by the Maine Farm Bureau Federation on the evening of March 28.

CONRAD F. HARRINGTON, Arts '33, who graduated at the University Convocation in May, is the great-grandson of Sir William Dawson, Principal of McGill from 1855-1893, the grandson of the late Bernard James Harrington, Arts '69, M.A. '85, LL.D. '99, for many years Professor of Chemistry at McGill, and the son of Conrad D. Harrington, Sci. '07.

Dr. JOHN HENDERSON, Ph.D., Arts '27, former holder of Delta Upsilon Memorial and Quebec Provincial Scholarships, has been appointed to a post with the National Research Laboratories, Ottawa.

LAURENCE C. TOMBS, Arts '24, M.A. '26, of the League of Nations Secretariat, officially represented McGill at the centenary of the University of Zurich in April. McGill was the only Canadian university with a delegate in attendance.

PROFESSOR KIANG KANG-HU, Director of the University's Department of Chinese Studies, has been appointed an Honorary Vice-President of the Sino-American Association, of Boston.

Dr. C. T. LANE, Sci. '25, Ph.D. '29, holder of an 1851 Scholarship since 1930, has been awarded the Sterling Scholarship by Yale University in physics and mathematics. The scholarship, which carries a substantial emolument, will extend for two years.

GEORGE E. MURRAY, Sci. '11, of Trail, B.C., has been awarded the Randolph Bruce Medal by the Canadian Institute of Mining and Metallurgy for the year's most notable contribution to the advancement of mining knowledge.

L. ST. J. HASKELL, Sci. '07, Assistant to the Vice-President of the Bell Telephone Company of Canada, has been elected President of the Electrical Club, Montreal.

W. E. GLADSTONE MURRAY, Arts '12, founder of the *McGill Daily* and Director of Public Relations of the British Broadcasting Company, reached Canada this spring to advise the Dominion Government in regard to the work of the Dominion Broadcasting Commission.

THE HON. A. KNATCHBULL-HUGESSEN, Arts '12, Law '14, has been elected President of the Canadian Club of Montreal.

THE HON. ALBERT J. BROWN, K.C., Arts '83, Law '86, has been appointed honorary Lieutenant-Colonel of the Eastern Townships Mounted Rifles, a unit of the Canadian Militia with headquarters at Stanstead, Que.

DONALD M. MORRISON, M.Sc. '22, Ph.D. '24, has been appointed Assistant Superintendent of the refinery of the Shell Oil Company recently completed at Montreal East. Dr. Morrison is also a graduate of the University of British Columbia and of Cambridge University.

Dr. JAMES NAISMITH, Arts '87, the originator of basketball, has presented a trophy to the High School at Almonte, Ont., which he attended as a boy, in memory of his sister, Miss Annie Naismith. This trophy is for annual competition in basketball amongst the girls of the school.

Dr. J. A. FAULKNER, Med. '04, of Belleville, Ont., has been chosen Liberal Candidate in the provincial riding of West Hastings.

GROUP CAPTAIN LINDSAY GORDON, past student, after service as chief air officer in the aviation branch of the Department of National Defence at Ottawa, is being transferred to Regina, Sask, to serve as Officer commanding the Military district, with the rank of Brigadier.

REV. DR. ROBERT JOHNSTON, Arts '87, of St. Catharines, Ont., has been elected Moderator of the Synod of Hamilton and London of the Presbyterian Church in Canada.

HON. F. J. CURRAN, Law '93, has been elected President of the Alumni Society of the Christian Brothers Schools of Montreal.

REV. DR. NORMAN A. MACLEOD, Arts '92, of Brockville, Ont. is the retiring moderator of the Synod of Montreal and Ottawa, Presbyterian Church in Canada.

"THE HIDDEN DOOR," another crime narrative from the pen of Frank L. Packard, Sci. '97, of Lachine, has recently been published.

DR. HERBERT LIGHTSTONE, D.S.O., M.C., Med. '10, has been promoted to the post of deputy Director-general of medical services of the British Ministry of Pensions. He has been a resident of London for the past 18 years.

DR. HAROLD L. GOKEY, Med. '17, has been re-elected Mayor of Alexandria Bay, N.Y., where he has practised since graduation.

MAJOR MAURICE A. POPE, M.C., Sci. '11, of the Royal Canadian Engineers, has been appointed a general staff officer in the office of the Director of Military Training at National Defence Headquarters in Ottawa. Recently he has been a liaison officer attached to the War Office in London.

HENRY N. CHAUVIN, Law '00, has been elected by acclamation as Batonnier of the Bar of Montreal.

DR. BERNARD L. HYAMS, Dent. '21, has been elected President of the Mount Royal Dental Society, Montreal.

DR. PERCY S. TENNANT, Med. 21, of Armstrong, B.C., has been appointed Medical Superintendent of the Indian Reserve at Kamloops, B.C.

DR. F. W. C. MOHR, Med. '05, has been elected President of the University Club at Ottawa for the third successive year.

W. S. LIGHTHALL, Law '21, has been chosen as the first Recorder of the town of Hampstead, Que.

DR. DAVID W. CROMBIE, Med. '13, has been appointed Superintendent of the Queen Alexandra Sanatorium at Byron, near London, Ont. Since 1926 he has been on the staff of the sanatorium at Calydor, Ont.

DR. A. H. JUDSON, Med. '04, has been elected President of the Medical Association of Brockville, Ont.

F. S. RUGG, K.C., Law '03, of Sherbrooke, Que., has been elected Batonnier of the St. Francis Bar.

MAJOR A. E. D. TREMAIN, Arts '23, has been promoted to the rank of Lieutenant-Colonel in the Militia and to the command of the 2nd Medium Brigade, 2nd Montreal Regiment of Artillery.

IN MEMORY OF DR. GEORGE C. RICHARDSON, Med. '87, for many years Sheriff of Carleton County, a stained glass window has been unveiled and dedicated in Trinity Anglican Church, Ottawa.

DR. J. A. NUTTER, Arts '00, Med. '04, has been elected President of the St. James Literary Society, Montreal.

REV. CANON C. E. RILEY, Arts '08, rector of St. George's Anglican Church, St. Catharines, Ont., has been appointed Rector of Christ's Church Cathedral, Hamilton, Ont., and Dean of the Diocese of Niagara. He has also received the honorary degree of Doctor of Divinity from Trinity College, Toronto.

DR. A. C. SELLERY, Med. '04, a medical practitioner in Long Beach, Cal., and President of the Seaside Hospital there, had much to do with the organization of Emergency relief plans when Long Beach was laid waste by an earthquake in March.

FRANK B. COMMON, K.C., Arts '13, Law '17, of Montreal, who is President of the Hydro-Electric Securities Corporation, Limited, has been elected to the directorate of the United States Electric Power Corporation.

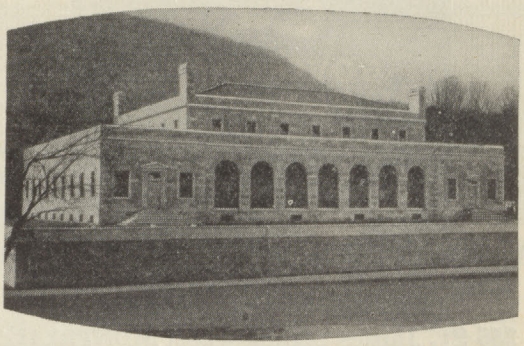
THE NAME OF THE LATE DR. H. M. AMI, Arts '82, long connected with the staff of the Geological Survey at Ottawa, is to be perpetuated in the New Brunswick Museum at Saint John, by his collection of stone age implements now housed there.

ROBERT B. MACLEOD, M.A., Ph.D., Arts '26, has been appointed Assistant Professor of Philosophy in Swarthmore College, Pa. Dr. MacLeod spent a year studying in Germany on a Moyse Travelling Scholarship and has since prosecuted advanced studies at Columbia and Cornell.

PALMER E. SAVAGE, Sci. '31, has been awarded one of five Strathcona fellowships for the investigation of transportation problems at Yale University. Mr. Savage is now working towards his M.Sc. degree at McGill.

HUGH S. SUTHERLAND, Ph.D. '31, has been awarded one of the ten Royal Society of Canada fellowships for the present year. Latterly, he has been employed in the research department of the Shawinigan Electro Products at Shawinigan Falls, Que.

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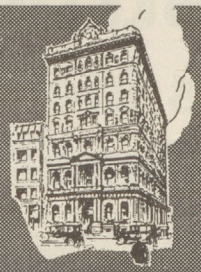
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MISS. O. MARY HILL, Arts '31, who has been serving as an assistant in English at the University, has been appointed National Girls' Work Secretary for the Presbyterian Church in Canada, with headquarters in Toronto.

PROFESSOR HAROLD W. HARKNESS, Ph.D. '29, who has been on the staff of Acadia University, Wolfville, N.S., for some time, has had an article on "The Stark Effect for Zenon" published by the Royal Society of London.

DR. G. R. LOMER, Arts '03, M.A. '04, the University Librarian, who was elected first President of the newly formed Quebec Library Association, gave as his presidential address an illustrated lecture on "The British Museum Library" in the Mechanics' Institute on April 27.

Births

BAKER—In Ottawa, on March 14, to Massy Baker, Sci. '13, and Mrs. Baker, a son (still born).

BRIERLEY—In Montreal, on February 28, to James G. Brierley, Arts '26, and Mrs. Brierley, a son.

CRAWFORD—In Montreal, on April 4, to R. Eric Crawford, Sci. '22, and Mrs. Crawford, a son.

DUCKWORTH—In Montreal, on March 8, to J. M. C. Duckworth, Arts '28, and Mrs. Duckworth, a son.

DUNTON—In Montreal, on April 21, to W. E. Dunton, past student, and Mrs. Dunton, a son.

FAULKNER—In Montreal, on March 9, to George V. Faulkner, Arts '30, and Mrs. Faulkner, a son.

FERRABEE—In Pittsburgh, Pa., on February 28, to F. G. Ferrabee, Sci. '25, and Mrs. Ferrabee, a son.

FRASER—In Ottawa, on March 7, to Dr. W. G. Fraser, Med. '10, and Mrs. Fraser, a son.

GOODNOH—In Montreal, on January 16, to Dr. S. T. Goodnoh, Dent. '26, and Mrs. Goodnoh, a daughter (premature).

McCALL—In Montreal, on May 6, to Alan D. McCall, Sci. '24, and Mrs. McCall, a son.

PERRAULT—In Montreal, on April 18, to Rene B. Perrault, Sci. '21, and Mrs. Perrault, a daughter.

SCOTT—At Grand Falls, Newfoundland, on March 10, to L. J. Scott, Sci. '23, and Mrs. Scott, a daughter.

STAVERT—In Montreal, on April 21, to Ewart Stavert, Sci. '14, and Mrs. Stavert, a daughter.

TREMAIN—At Kingston, Ontario, on April 28, to K. H. Tremain, Sci. '29, and Mrs. Tremain, a daughter.

Marriages

BIGGAR—In Westmount, Que., on May 6, Miss Amy Beatrice Maude Webster and Horace William Biggar, Com. '31.

CHAIT—In Montreal, on March 5, Dr. Rachel Chait, B.A. '29, M.A. (McGill), Ph.D. (Cornell), and John J. Wasserman, 414 Victoria Ave., Montreal.

GAVSIE—In Ottawa, on April 26, Miss Sadie Shenkman, and Dr. William Harold Gavsie, Med. '26, of Montreal.

GREAVES—In Montreal, on February 15, Miss Catherine Elizabeth Clark, and Dr. Harold Layland Greaves, Dent. '25, of Montreal.

HENDERSON—In Westmount, Que., on May 18, Miss Jean Tasker Henderson, M.Sc., Arts '22, and Lieutenant William Phillip Phillips, R.N.R.

MOORE—At Ahuntsic, Que., on April 22, Miss Florence Margaret Price and Rev. Arthur B. B. Moore, Arts '28.

PATERSON—In Saint John, N.B., in February, Miss Daphne Paterson, M.S.P.E. and past student in Arts, and A. J. Shefoon.

POE—In Montreal, on March 11, Miss Stella Marion Hayden and Alexander Spence Poe, Sci. '17, of Montreal.

WEINER—In Montreal, on February 25, Miss Florence Weiner, B.A. '31, and Louis Portner, 3831 Old Orchard Ave., Montreal.

WEINFIELD—In Montreal, on March 6, Miss Vera Weinfield, Mus. Bach. '29, and Irvin J. Berger, New York.

Deaths

ADAMS, DR. HORACE PERLEY, Med. '06, in Montreal, March 13, 1933.

ARMSTRONG, DR. GEORGE ELI, C.M.G., L.L.D., D.Sc., Med. '77, in Montreal, May 25, 1933.

BROOKS, CHARLES EDWARD, Sci. '08, in Montreal, April 10, 1933.

BROWN, DR. PETER E., Med. '63, at Ste. Anne de Bellevue, P.Q., February 28, 1933. aged 93 years,

BUSBY, DR. JOHN, Med. '91, in Spokane, Washington, March 9, 1933.

CANTLON, WILLIAM NORMAN, Sci. '30, accidentally at Kirkland Lake, Ontario, March 7, 1933.

CHURCH, DR. FREDERICK WILLIAM, Med. '80, at Aylmer, P.Q., February 15, 1933.

DRUM, COL. LORNE, C.B.E., Arts '92, Med. '96, at Winnipeg, Man., April 15, 1933. Buried, with full military honours in Ross Bay Cemetery, Victoria, B.C., April 19, 1933.

FORTIN, THE HONOURABLE THOMAS, Law '91, at Ste. Rose, P.Q., March 31, 1933.

HAMMOND, HENRY RICHARD, Law '80, at Lachute, P.Q., March 18, 1933.

HEWITT, DR. THOMAS JOSEPH, Med. '06, in Montreal, March 16, 1933.

HUME, DR. GORDON MACKENZIE, Med. '05, at Sherbrooke, P.Q., April 10, 1933.

OGILVIE, DOUGLAS WATSON, past student in Law, '92-'94, in Montreal, May 24, 1933.

PEDLEY, REV. JAMES W., Arts '84, in Toronto, May 24, 1933.

PITCHER, MRS. FRANK HENRY (Harriet Brooks, Arts '98), in Montreal, April 17, 1933.

SIMS, DR. HAIG ALLISON, Med. '04, in Montreal, May 13, 1933.

SUTHERLAND, JOHN, past student, in Toronto, March 8, 1933.

WILSON, DR. OMAR MATTHEW, Med. '04, in Ottawa, May 18, 1933.

A McGill Conspectus (*Continued from Page 55*)

On the other hand, very cheap toys were dangerous. One little wooden bird, found on sale in the city, for example, had yellow feet painted with enough chromate of lead to prove fatal to a child. Some check on the use of lead in paints for colouring toys was thus proved to be desirable.

LUNG SURGERY

In one of the outstanding papers delivered this winter before the Montreal convention of the American College of Physicians, Dr. E. W. Archibald, Professor of Surgery and Chief Surgeon of the Royal Victoria Hospital, reported upon the procedure in nine cases of lobectomy—surgical removal of one lobe of the lung—in which the mortality (2 cases) had been appreciably lower than previously reported by other authors of similar, or any other, procedure. The cause of death in the two fatal cases had been ascertained, and a development of the procedure to minimize the danger of the complication which had caused death in these instances had been evolved. Dr. Archibald has been the recipient of many honours in recognition of his scientific development of surgery of the lungs and his work in this field is a source of pride and gratification to his colleagues of the Medical Faculty of McGill.

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BIOCHEMISTRY PROGRESS

Advanced work carried out in recent months at McGill in connection with pituitary and placental hormones was described to the American College of Physicians by Dr. J. B. Collip, Professor of Biochemistry, in February. The work of Dr. Collip's department has won world-wide recognition, and his paper made it clear that the highly successful experiments of the past were being equalled, or even surpassed, in value by research investigations now under way. Dr. Collip was recently elected to Fellowship in the Royal Society, of London, England; and the notable work of his department was encouraged by gifts of $10,000 from the Honourable Vincent Massey and $5,000 from a donor who requested that his contribution be anonymous.

BEDSIDE MEDICAL PRACTICE

That modern hospitals and modern physicians might do well to curb their scientific curiosity and return to simpler methods of bedside practice was the theme of an address by Sir Andrew Macphail, Professor of the History of Medicine in McGill University, at the convocation of the American College of Physicians held in Montreal in February. Sir Andrew did not suggest that he was an opponent of the application of scientific knowledge to medicine, but stated his belief that, perhaps, the scientific fever had been carried too far, to the detriment of invaluable bedside practice and experience.

PHYSICAL EDUCATION CHANGES

Admission of men to the McGill School of Physical Education and a raising of entrance requirements were announced by Corporation on May 20. Admission to the shorter diploma course will in future require that the candidate shall have completed one year in the Faculty of Arts and Science; admission to the higher diploma course will be granted only to students holding a university degree. These changes will go into effect on the opening of the School next autumn.

BOOK REVIEW SECTION

In order to give the members of the Graduates' Society information on books by members of the University staff, a "Book Review Section" is carried in each number of this magazine. In the March issue there were reviews of five books recently published. It is hoped that this section will become recognized by all at the University as a suitable place in which to have a review of their publications appear.

CHICAGO VISITORS

Any graduate visiting Chicago during the Century of Progress Exposition will receive a cordial welcome at the Oriental Institute of the University of Chicago, where arrangements have been made for registration with Dr. Watson Boyes, Secretary of the Institute. The address is 1155 East 58th St., telephone Midway 0800. Or visitors may get in touch either before or after arrival with Mr. J. P. Ball, President of the Chicago Branch of the Graduates' Society at 2514 East 73rd Place, telephone South Shore 2656, or with Mr. C. W. Stokes, Secretary, at 3958 Calumet Ave., telephone Douglas 8191 or Saginaw 1650, and any desired information will be gladly furnished.

VISIT TO THE WEST

Dr. Edward Archibald, Professor of Surgery and Director of the Department of Surgery at McGill, has just returned from a visit to the Pacific Coast, in company with Mr. Grant Hall, Vice-President of the Canadian Pacific Railway. During the visit he had an opportunity of meeting McGill graduates in many places. In Vancouver the McGill Graduates' Society tendered him a dinner, and on the following evening he addressed the Vancouver Medical Society, upon modern developments in lung surgery. In Victoria he was tendered a luncheon by some forty of the medical men of the city, where he spoke again upon certain aspects of lung surgery. In Winnipeg he was tendered a dinner by a large number of the medical men, and he also gave a Clinic at the General Hospital, upon certain cases of biliary and gastric diseases.

CORNWALL MEDICAL SOCIETY

Dr. C. F. Martin was recently the guest of honour at the annual dinner of the Cornwall Medical Society, at which many McGill graduates were present. He addressed them, giving personal reminiscences of his contacts with some of the famous scientists of Europe, whom he had met during his years of study abroad. Later on some moving pictures were shown of surgical operations. The Cornwall Medical Society is one of the very active organizations near to Montreal, and to which various McGill graduates have gone from time to time.

BASEBALL ON CONVOCATION DAY

As an entertainment for the new graduates, a soft ball baseball game was arranged between the older graduates called the "Martlets," and the new graduates called the "Fledglings."

Much to the surprise of the new graduates, the "Martlets" were leading by 8 to 2 in the last inning. At this important moment the "Fledglings" fell on the "Martlet" pitcher and drove in 8 runs, to win by a score of 10 to 8.

The teams were composed of the following players:

MARTLETS: Consiglio, W., Forbes, D. S., Fletcher, G. H., Glassco, G. B., Graham, G. T. P., Kenrick, N., Lowry, Dr., Morton, Dr. J., Reed, J. G.

FLEDGLINGS: Baker, G., Hilliard, D., Laurie, E. S., Lavut, L., Law, R. J., McLennan, D. S., McMaster, D. R., Mullaly, J. E., Nesbitt, A.D.

Lost Addresses

Any information in regard to the graduates listed below will be welcomed by the Graduates' Society, Executive Office, McGill University.

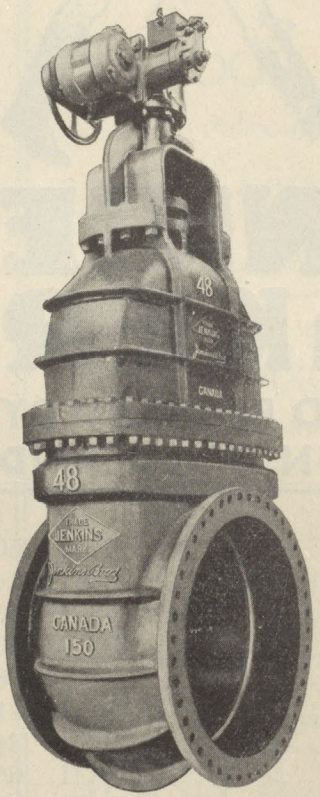
FACULTY OF LAW

Amirkhanian, Armen.....B.C.L. '21
Babcock, Henry H.....B.C.L. '15
Baril, Joseph.....B.C.L. '84
Baynes, Edward Alfred.....B.C.L. '67
Beauchamp, Joseph.....B.C.L. '78
Beaudet, Omer.....B.C.L. '82
Brooke, George Henry.....B.C.L. '82
Burke, Edmund A.....B.C.L. '00

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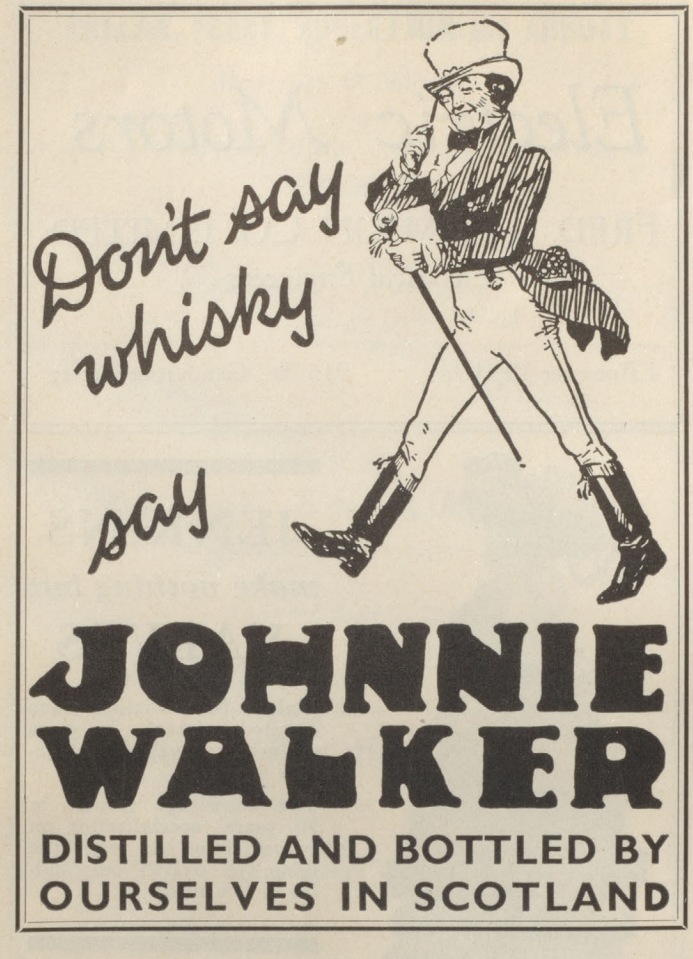
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B.C.L. '11
Cullen, James . . . . . B.C.L. '84
Dansereau, Arthur . . . . . B.C.L. '65
Decary, Alderic . . . . . B.C.L. '79
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Duffy, Fabian Joseph . . . . . B.C.L. '05
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England, George Prevost . . . . . B.A. '88
B.C.L. '90
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B.C.L. '32
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Hanson, Albert C . . . . . B.A. '95
B.C.L. '96
Hatchette, Francis Joseph . . . . . B.C.L. '91
Hing, Peter . . . . . B.C.L. '09
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Jones, Arthur Gordon . . . . . B.C.L. '94
King, Hector Henry . . . . . B.C.L. '18
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Leet, Lyman Tell . . . . . B.C.L. '83
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McDonald, Albert John . . . . . B.C.L. '13
McDonald, Frank H . . . . . B.C.L. '73
McDonald, John S . . . . . B.C.L. '76
MacLennan, Malcolm . . . . . M.A. '25
B.C.L. '29
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Nantel, Joseph Eugene . . . . . B.C.L. '21
Nicholson, Demetrius Nicholas . . . . . B.C.L. '11
Nolan, Cyril Patrick C . . . . . B.C.L. '21
Ogilvie, William Prescott . . . . . B.C.L. '04
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Senecal, Oscar N . . . . . B.C.L. '23
Shulemson, Abraham . . . . . B.A. '18
B.C.L. '22
Simard, Joseph Ernest . . . . . B.C.L. '21
Shvemar, David I . . . . . B.C.L. '20
Soloman, Nathan . . . . . B.C.L. '13
Spong, Rev. J. Rowan . . . . . B.C.L. '74
Taschereau, Arthur . . . . . B.C.L. '64
Trudel, Bouthillier J . . . . . B.C.L. '79
Vineberg, Soloman . . . . . B.A. '06
B.C.L. '16
Wight, James Henry . . . . . B.C.L. '68
Yuill, Lionel Shirley . . . . . B.C.L. '18

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Cooper, Hugh Christopher D . . . . . B. Arch. '24
Despatie, J. O . . . . . B. Arch. '16
King, Edmund DeWitt . . . . . B. Arch. '12
McEvers, Harold Eric . . . . . B. Arch. '20
MacLeod, Alexander Norman . . . . . B. Arch. '24
Parsons, L. H . . . . . B. Arch. '16
Perry, Reginald Selby . . . . . B. Arch. '27

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Goodman, Lawrence	D.D.S.	'25
Henderson, Ronald	D.D.S.	'26
Herman, Reuben	D.D.S.	'27
Hils, Oswald Herman	D.D.S.	'09
Kindestin, Wm	D.D.S.	'24
Lightstone, Louis J	D.D.S.	'25
MacLeod, Wm. David	D.D.S.	'25
Moraites, George	D.D.S.	'20
Parker, Chester T	D.D.S.	'20
Pelletier, Joseph A	D.D.S.	'15
Richstone, L. H	D.D.S.	'24
Rixford, Emmet Hawkins	D.D.S.	'65
Russell, Arthur Fabian	D.D.S.	'27
Thornton, L. H	D.D.S.	'17

DR. A. R. ELVIDGE RETURNS TO M.G.H.

(From the Montreal Gazette, June 2, 1933)

Dr. A. R. Elvidge, who has been studying neuro-surgery in Europe for the past three years, has recently returned to Montreal to take over his duties as assistant in surgery, in charge of neuro-surgical work, at the Montreal General Hospital. He has been at work in London, Antwerp and Lisbon, and has made a study of neurological methods in various European countries.

A graduate of McGill, where he obtained his M.D., C.M. in 1924, his M.Sc. in 1925 and his Ph.D. in 1927, Dr. Elvidge was at first a research fellow in physiology and later a demonstrator in the same subject at the university. He then turned to neuro-surgery, and after receiving an appointment to the staff of the Montreal General Hospital and considerable training under Dr. Wilder G. Penfield at McGill, he left for Europe to further his knowledge in his chosen field.

From now on he will be in charge of neuro-surgical work at the M.G.H. and will work in close co-operation with Dr. Penfield and the staff of the new Neurological Institute at McGill.

Chief Universities of Canada.—Total enrolment, 1929-30: Acadia, 537; Dalhousie, 925; Mt. Allison, 691; McGill, 3,792; University of Montreal, 12,309; Laval University, 11,124; University of Ottawa, 2,012; University of Toronto, 7,178; Queen's University, 3,820; University of Western Ontario, 1,207; University of Manitoba, 3,888; University of Saskatchewan, 2,813; University of Alberta, 1,560; University of British Columbia, 2,610.—(From "5,000 Facts about Canada.")

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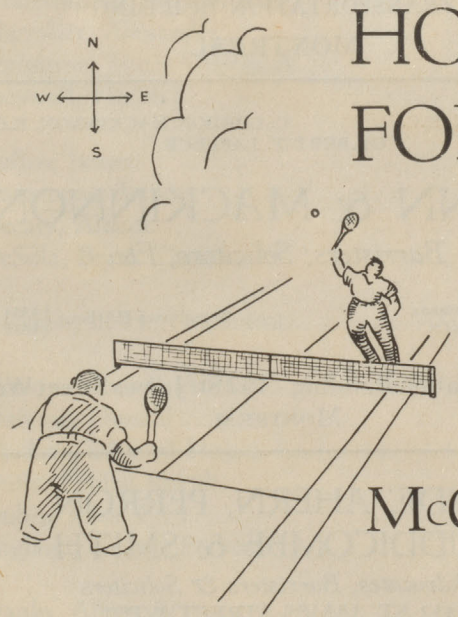
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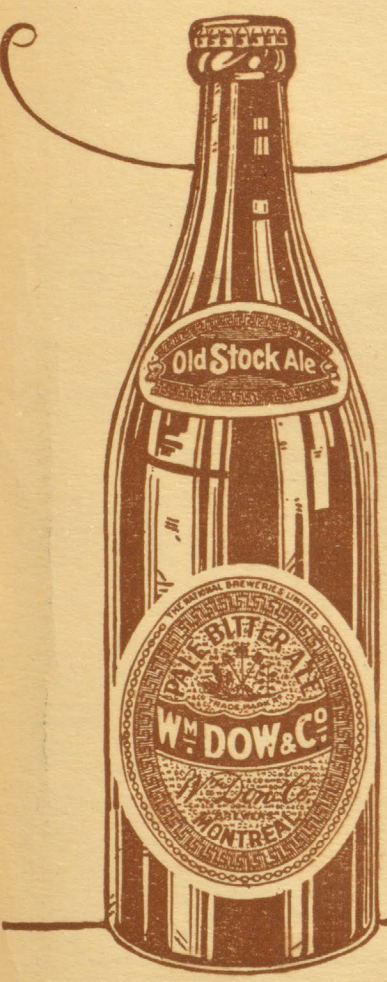
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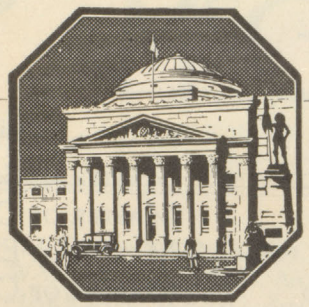
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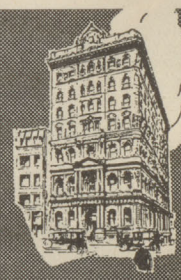
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THE FRENCH SUMMER SCHOOL, 1933

The McGill French Summer School

By PROFESSOR RENÉ DU ROURE

(Director of the School)

EVERY McGill graduate realizes that many opportunities for the study of French exist in Montreal, the heart of French Canada. The French Summer School of McGill University provides unexcelled facilities for the study of this language and it may be of interest to readers of *The McGill News* to learn something of the School's history and organization.

As early as 1904 a French summer course was given under the auspices of McGill and some years later the School was held at Macdonald College. This school, which was small compared to the summer school of today, was in session until 1914, when the Great War brought it to an end. After a lapse of eight years, the course was resumed in 1922 at the Royal Victoria College, which has been the headquarters of the School since that time. In spite of a long period of inactivity, the School enrolled 82 students at its first post-war session, a success no doubt largely due to the new interest in French that the War had awakened. Since that time the number of students attending the School has increased steadily, except in the past two years; but even in these difficult times the School's virility has been proved and it has been able to carry on as usual. The maximum attendance was reached in 1930 when 215 students registered.

The ages of the students range from seventeen to seventy years; and about 80% of those attending are women. Many different vocations are represented. There are doctors, lawyers, businessmen, clergymen, priests, engineers, and nuns; but the majority of the students are college professors, High School teachers, or university undergraduates. Every province in Canada and almost every state in the United States have been represented. Students come from such distant points as Colorado, Texas, Kansas, British Columbia, and Saskatchewan. One year there were two representatives from Hawaii. New York State and Pennsylvania send the largest quota of students, with Quebec, Ontario, and the Maritime Provinces next in order. Many

Montrealers attend the course each summer; and the number of McGill undergraduates in attendance is increasing each year.

During the five weeks of residence the students live in an exclusively French atmosphere, pledging themselves to use only the French language. They speak, read, and hear nothing but French. The order of the day at the School is a busy one. Lectures are held from nine to one o'clock each morning. After lunch, at which conversation is directed in French by members of the staff, the students attend conversation groups, visit the Art Gallery accompanied by a French artist, or the Château de Ramezay, or some other place of historic interest. Several times a week an industrial visit is planned to one of the large factories in Montreal where students may see the process of manufacture and learn many useful terms in French. Evening activities are varied: there are sing-songs where the students become familiar with all the charming old French folk-songs; there are visits to the French theatres, concerts, lectures, and special soirées organised by the students themselves and by the staff. Through such variety of entertainment all interests are served.

The lecture courses at the School are divided into three grades to meet the varied requirements of students. For the Elementary Course students must have some knowledge of French grammar, though fluency in the spoken language is not expected. The Intermediate Course is for those who have had some practice in speaking French and provides much practical and oral work, with a few literary subjects as well. In order to be admitted to the Advanced Course the student must be able to speak French fluently and must have a general knowledge of French literature. This course is attended mainly by students who are working towards their M.A. degree.

The M.A. degree is granted to students who have attended the Advanced Course of the School for four summers, passed all their examinations successfully, and written a thesis in French, in accordance with the rules of the McGill Faculty of Graduate Studies and Research. These requirements are rather higher than those demanded from regular McGill students, as four summers in the Advanced Course represent considerably more than one session in the Graduate School at McGill. The advanced courses are given by highly qualified and experienced professors and are concluded by a thorough examination. The subjects of these courses comprise the most advanced literary work. Each year more and more students are registering in this advanced grade.

For such an organisation as the McGill French Summer School a large staff is required and the number of professors varies from twenty to thirty according to the attendance. The staff includes some or all the members of the French Department at McGill, other French instructors carefully chosen from the staff of Canadian or American colleges, and teachers from private schools in Montreal and Toronto. They are all of French nationality. All the staff share in encouraging the students to speak French, but a number of teachers are specially designated to conduct conversation groups of elementary or advanced character. The administration and organisation of the course are conducted by the Director, assisted by the Executive Secretary.

Far from being a charge on the University, as are so many educational enterprises, the French School shares with the football team the honour of being not only self-supporting but productive. During the past twelve years it has brought a steady revenue to the Royal Victoria College for the rental of rooms, and has also paid a regular surplus to McGill University. It is worthy of note that these favourable results have been obtained with very moderate fees.

Needless to say, the French Summer School has been a strong factor in making the name of McGill known and in enhancing the reputation of the University throughout Canada and the United States. It is our hope that a greater number of McGill graduates, realizing the exceptional opportunity for the study of French that lies at their very door, may take advantage of it and join our ranks. We assure them of a warm welcome.

UNIVERSITY VETERANS LEAGUE

Sir Arthur Currie has accepted the invitation of the newly-formed University Veterans League to attend a reunion dinner in the Royal York Hotel, Toronto, following the McGill-Varsity rugby game on the evening of Armistice Day, Saturday, November 11. University war veterans, or veterans of university war units, who wish to attend the dinner are invited to make their reservations through George F. McKelvey, President of the University of Toronto Overseas Company Club, University Post Office, Toronto, Ontario.

WRESTLING COACH APPOINTED

Appointment of Frank Saxon, Canada's wrestling coach at the last two Olympic Games, as wrestling instructor at McGill was announced in the press in July. Mr. Saxon has achieved an enviable reputation in his chosen field, having developed many fine wrestlers at the Central Y.M.C.A., Montreal, and at the Canadian National Recreation Club. His appointment should improve the quality of wrestling at McGill both in intra-mural competitions and in intercollegiate contests.



The Approaching Football Season

By D. A. L. MACDONALD

IT is fourteen years since McGill had a football team that graduates and undergraduates could really boast about. That isn't such a long time ago, and it will be a few years yet before some of the really great names of the past reappear in the football history of the college, provided that the progeny of some of those immortals inherit their fathers' gridiron genius. In the meantime, McGill has managed to win one football title and although, at the time, the 1928 team created considerable excitement on the campus, it wasn't a twelve to brag about. Even the most enthusiastic undergraduate around at the time was willing to admit that the title was won mainly by the driving personality of a dynamic graduate, Dr. Cyril (Flin) Flanagan, who instilled into a rather ordinary collection of footballers some of his own tremendous enthusiasm and vitality, with the result that they scrambled to a championship over teams which were their superiors in the finer arts of the game. Sometimes one wonders if McGill will have to wait for a championship until the "Old Guard" of 1912-13-14 and later of 1919 personally supplies the material for another standout array, or whether it will ever again be possible to stimulate enough interest among what appears to be a student body rapidly growing apathetic to football titles in general.

There is no doubt that, at the present time, interest in football on the campus is not what it was just after the war. The writer first entered the portals of Old McGill in the fall of 1920 for what proved to be a much more prolonged stay than was at the time anticipated, but he can recall nevertheless the tremendous enthusiasm evinced about the campus regarding the prospects of the football team. Of course, at that time, McGill's rugby fortunes were at their peak. The great team of 1912-13-14 had returned from the war and had proceeded to walk off with another title. In 1920, Toronto captured the championship—but only after a play-off in Kingston with the Red team; and there was such eagerness among the sophomore body that fall to aid the team in its bid for the title that some 300 frosh were herded to the stadium thrice weekly to practice cheers while the squad went through its paces. Finally, when the big game did roll around, about 300 made the trip to Kingston to lend vocal support. Many undergraduates didn't have the fare, but they got there just the same. One resourceful group hired a box car on one of the railroads and went to Kingston as freight, so the story goes.

Four years later, when these frosh were seniors, or some of them were at any rate, a new crop of freshmen had appeared and seemed to be developing the habit of having tea downtown in the afternoons. Barely half of the railbirds at the Stadium practices were McGill undergraduates and the football team was not winning games with the regularity of former years.

Of course, I am not tracing the decline in football achievement at McGill to the circumstance that, even in its freshman year, the undergraduate body is shifting its interests from football to afternoon tea, but the fact remains that in the last decade there has been a sharp drop in the interest taken in the fortunes of McGill on the gridiron. The fact of the matter is that the

	Basketball	Boxing, Wrestling, Fencing	Eng. Rugby	Golf	Gymnasium	Harriers	Hockey	Rugby	Soccer	Swimming	Water Polo	Tennis	Track	Rowing	McGill	Toronto	Queen's	Montreal	Western
															CHAMPIONSHIPS				
1931-32 . . .	M	Q	M	T	M	M	T	W	T	M	T	Mtl	M	T	6	5	1	1	1
1932-33 . . .	M	T	M	Mtl	T	M	M	T	T	M	T	M	M	T	7	6		1	
Standing 1898-1933																			
1915-1919 War Years																			
McGill	9	4	6	3	8	4	6	6	6	13	15	13	19	2	114				
Toronto . . .	8	12	3	6	5	14	16	14	16	7	5	4	11	5		126			
Queen's	3	4					5	9	1								22		
Montreal . . .				1								1						2	
Western								1											1

Thirty-five Years of Intercollegiate Athletics

McGill student is devoting more and more of his attention to study, that the athlete is loath to spend many of his precious hours to practice on any team and only when championship teams loom in the offing does the undergraduate lay down his text-book (or his tea-cup) and "get out and cheer the team to victory." Perhaps it will take another football squad such as the immortals of pre-war days and the 1919 team to stimulate interest in football among the would-be athletes and the student body as a whole.

All of which brings us down to the present day and the question of what likelihood there is of this transformation taking place this autumn or in the immediate future.

McGill will enter the 32nd year of intercollegiate football competition, a few weeks hence, with virtually the same club that started out last season in such auspicious fashion, but encountered more and more difficulty in winning games as the campaign advanced. Carvel Hammond, the fleet youngster from Sherbrooke, has graduated and so has a brilliant outside wing, Harry Griffiths, who, with one long run of something like 100 yards last fall, won for McGill one of its all too few victories. This pair are the important members of the small group which has passed through the portals for good.

Thus the starting line-up of almost any McGill team of last fall (and there were many, due to an epidemic of injuries) can be tossed into action when the 1933 opening game rolls around. Don Young, rated the outstanding footballer in Canada, is serving his third successive year as captain, and will take into action the most experienced team in the union. From end to end on the line, there is not a man who has not played at least one season of senior Canadian football, or on the other hand has not had at least three years' grounding in the fundamentals of football in the hard, thorough schools to the south of us. A good line is the first requisite of any twelve; and if experience counts for anything under fire, McGill should start the season hopefully.

The backfield may present a problem, but if Westman, the kicking star of last year's freshman team, is available, the survivors of 1932, even with Hammond gone, ought to do nicely. McGill years ago produced the greatest kicker the union has ever seen, but since the war there have been no Billingtons to grace a Red backfield,

and when you are looking for causes for the string of years without a championship, you can jot this down as reason number one. Even with the forward pass, it is still a distinct advantage to have someone who can boot the ball 50 or 60 yards. It may be tough on the outside wings, but it saves the line-plungers a lot of breath.

It would be impossible in this article to discuss the merits of each player of last year's squad who is due to return to college; or to weigh the abilities of the best players on the rather good "second" teams of 1932 who may find places on this fall's senior team. It is also impossible to assay the probable worth of the senior team as a whole before the pass-list for the fall supplementals has been published. The "agony column" has been the cause of more than one championship lost before now, particularly at McGill where, to the amazement of many, study is still regarded as a more important activity than sport. Still, it would be rather exciting to sit in Molson Stadium (now appearing in its nattiest garb, with a "gunite" finish of silver hue) and watch the seventh football title come to McGill in 32 years of at times fruitless endeavour.

Convocation Address

(Delivered before the Annual Convocation of McGill University, May 25, 1933)

By THE HONOURABLE VINCENT MASSEY

Mr. Chancellor, Mr. Principal, Ladies and Gentlemen:

I am very happy indeed to be with you here today and I am most grateful for the privilege. I want you to know, however, that I am under no illusion as to the function of a speaker on such an occasion as this. He is welcomed with a courtesy complete and disarming, but, Mr. Chancellor, this does not disguise the fact that a Convocation Day address is naturally regarded by the honest-minded student not as a culminating blessing after four years of toil, but rather as a final ordeal to be faced with fortitude, the last inevitable hurdle before freedom is won—freedom from obligatory learning, and shall I say compulsory inspiration.

Ladies and gentlemen of the graduating year, I have no advice to give you. I have always thought as a matter of fact that such a procedure reverses the proper order of things. It would be more appropriate, it seems to me, that at such a ceremony as this a visitor to a university from what is humorously described as the practical world, should be the recipient rather than the giver of advice.

But if even in normal times the counsel of an older generation to its juniors has suggested the assumption of superior virtues, the attitude of your elders in these years should surely be one of sincere humility. No generation has had less justification for advising its successors than that to which you are junior. We are not proud of the man-made world we invite you to enter. We have no admonition to offer you. On the contrary we can only make an appeal for your help and your co-operation. If society today offers to a graduating class too few jobs for its members—as, alas, it does—it invites their energies to a full share in the one all-important job of setting things right. We need you while the tide of your minds is in flood.

It is, of course, a familiar commonplace at graduation ceremonies to say that the community calls youth to its aid. We confidently affirm on rhetorical occasions that ours is a young man's country, that the qualities of vitality and imagination—the attributes of youth itself—are in the warp and woof of our national being. We know the venerable phrases. Do they point to aspirations or to facts? It is very easy to assume that because we are a young nation we naturally give pride of place in our national life to youth. Am I uttering a startling heresy when I say I do not think we do? In the practice of everyday affairs, in the actual award of responsibility, I do not believe we can yet be called a "young man's country."

It is fair, I think, to ask ourselves this question: is youth, as youth, handicapped in this Dominion? Do we lack the courage to place very young men with the required qualifications in posts of high importance as happens now and then in England or across our border? In the answers to these questions I believe it difficult to avoid a reluctant affirmative—even in the sphere of commerce

where efficiency is supposed to be the paramount consideration.

The stratification of some of our activities on the basis of age is significant. I am unaware of the existence in older countries of organizations limited to young men or young women alongside similar associations for older persons. Here such junior groups exist and, of course, perform a very useful function but, perhaps, their very existence suggests the fact that their members have been unable to find adequate expression for their interest and zeal in senior bodies. Surely the ideal is achieved when in all activities of life, above all in society as a whole, the ripe maturity of judgement which one associates with years, and the imagination and freshness of youth, are joined in a common effort.

Where we have failed to approach this mutual understanding it is often urged that, after all, youth is irresponsible. Well, people of all ages tend to be irresponsible when they are deprived of responsibility. It is natural that youth should take a radical view of life, but if this is expressed sometimes with an exuberance which outruns discretion cannot this be regarded as an inevitable reaction to an exclusion from a fuller share in the control of our affairs? On the other hand, where we have drawn nearer to the ideal balance between the ages, we can look for a reciprocal generosity of outlook on the part of youth itself.

This is an era when everything is subject to an insistent challenge. That is healthy. But one can challenge without prejudging. And one can preach new things with no lack of fairness to the old. The youthful mind can learn from the mellowness of years that which can give its own views a better balance and therefore greater validity. Whatever be our opinions they gain power from the grace of humility. Again, acerbity gives no edge to thinking; it only sharpens invective. The greatest radical I know is marked by sweetness of temper and generosity of mind and a "nature sloping towards the sunny side."

The intensity of existence in the New World has long been inclined to divide life into water-tight compartments. Whatever the activity may be, economics, or horsemanship, or stockbroking, or contract bridge, or the practice of law, or golf—occupation or pastime alike—we are apt to view it as an isolated factor and not as part of a whole.

It seems to me that recovery can only come—and we may abandon all illusion that it will be an automatic process—recovery can only be achieved as we succeed in bringing together the practical and the theoretical into a healthy and natural partnership. Goethe puts in Wilhelm Meister's indenture the words: "To act is easy, to think is hard; to act according to our thoughts is troublesome." Never was it so needful to apply the moral of this to our affairs as it is today. In such a process, as I have said, the graduate of the day can play a significant and important part.

We have never followed the theorist far afield. Public opinion for the most part has looked to the practical man for guidance. We have honestly believed in the infallibility of the business mind, not only in business but elsewhere as well. But public opinion knows no fidelity and now, it would seem, seeks fresh guidance, and today the economist is embarrassed by the number of disciples who crowd to his feet. The works of economic experts, long neglected, are now awaited with breathless interest, a rapid change of view. There are of course dangers in a new-found obsession with theory. Mr. Asquith once spoke scornfully of "the ghostly ballet of bloodless categories." But, as I have suggested, we have inherited a suspicion of mere theory which is at bottom a safeguard. We look on the indulgence of abstract ideas as a rather questionable foreign practice. We have inherited from our British ancestors a taste for what one Englishman has called "a traditional pleasure fit almost to be ranked as a national sport—to fly darts of good-natured irony against the lover of ideas."

So there is probably little immediate risk of our becoming a nation of high-brows (for which we may be thankful). There are certainly other perils more imminent. We may safely therefore direct our efforts to seeing to it that the function of thinking is brought into relation to action itself, that thinking is corrected by experience, and action is inspired by thought. In the performance of this task of reconciliation, I can see new obligations upon the university of today and new opportunities for its sons and daughters. We cannot, it is true, breach the wall between the man of action and the man of thought through any effort to make the university "practical" in the wrong sense.

This can only degrade it. Sound thinking and free thinking within, and the gift of trained and educated minds (and the two things are not the same) to the world without, such are its ancient functions. But these we need with a new and challenging insistence. The world calls afresh upon the university because of the new problems which demand thinking—in the field of economics—in the international sphere, and above all in the science of government itself. It is to those who have grown up with these new problems, who are more familiar with their nature than those who have been inundated by them, that we must look for their eventual solution.

Employment Bureau Report

April—June, 1933

By G. B. GLASSCO

(Director of the Bureau)

It is encouraging to report for the second quarter of 1933 a noticeable improvement in the employment field, and that our Bureau has succeeded in making 29 placements. Thus, except for one other, this quarter has shown the best results since the Bureau was started in January 1931, and in addition the placements made during the last three months present prospects of greater permanency than in any quarter heretofore. Three examples may be quoted:—

An international chemical firm with Canadian Headquarters in Montreal, had an opening for a sales executive. One of our Commerce graduates of several years' standing has been engaged to take under his own supervision the development of sales for a new chemical product, with the prospect of building up an allied business under his own control.

A recent graduate in Commerce was appointed editor of a trade magazine, and has already assumed the editorship of another trade magazine published by the same firm, so that his connection is proving mutually beneficial, with assurance of continuation.

An engineering graduate of four years' standing was put in touch with a new firm of trade representatives whose business has developed sufficiently to warrant his going to England for several months, where he will represent the firm.

This quarter has again shown a lack of good material with which to fill positions where stenographic ability is essential. One promising position for a male stenographer could be filled only by recourse to our list of non-McGill men. In regard to women stenographers, the same thing applies, as less than 3% of the women registered have enough ability in typing and dictation to secure office positions, for at the present time only well-qualified girls are chosen from among the many applicants available.

It should be evident that this Bureau is rendering direct assistance to McGill men and women, to the University staff, and to many Canadian employers; but it seems unlikely that due credit or recognition will be given the Bureau for its work. It is to be remembered that the Employment Bureau has been undertaken by the Graduates' Society entirely at its own expense; and the outlook for the Bureau cannot be considered bright until definite arrangements are made for its financing. Otherwise it cannot develop to give service adequate to the needs of the University in this field. That this need has been recognized by almost all universities in North America, and by the larger ones in Great Britain, who in consequence conduct employment services, indicates that at McGill this work should be carried on for graduates of all faculties of the University as completely and efficiently as possible.

A detailed summary of positions which have been filled during the quarterly period follows:

PLACEMENTS:

MEN—	Permanent	16	
	Temporary	4	20
WOMEN—	Permanent	7	
	Temporary	2	9
			29

PLACEMENTS BY CATEGORIES:—

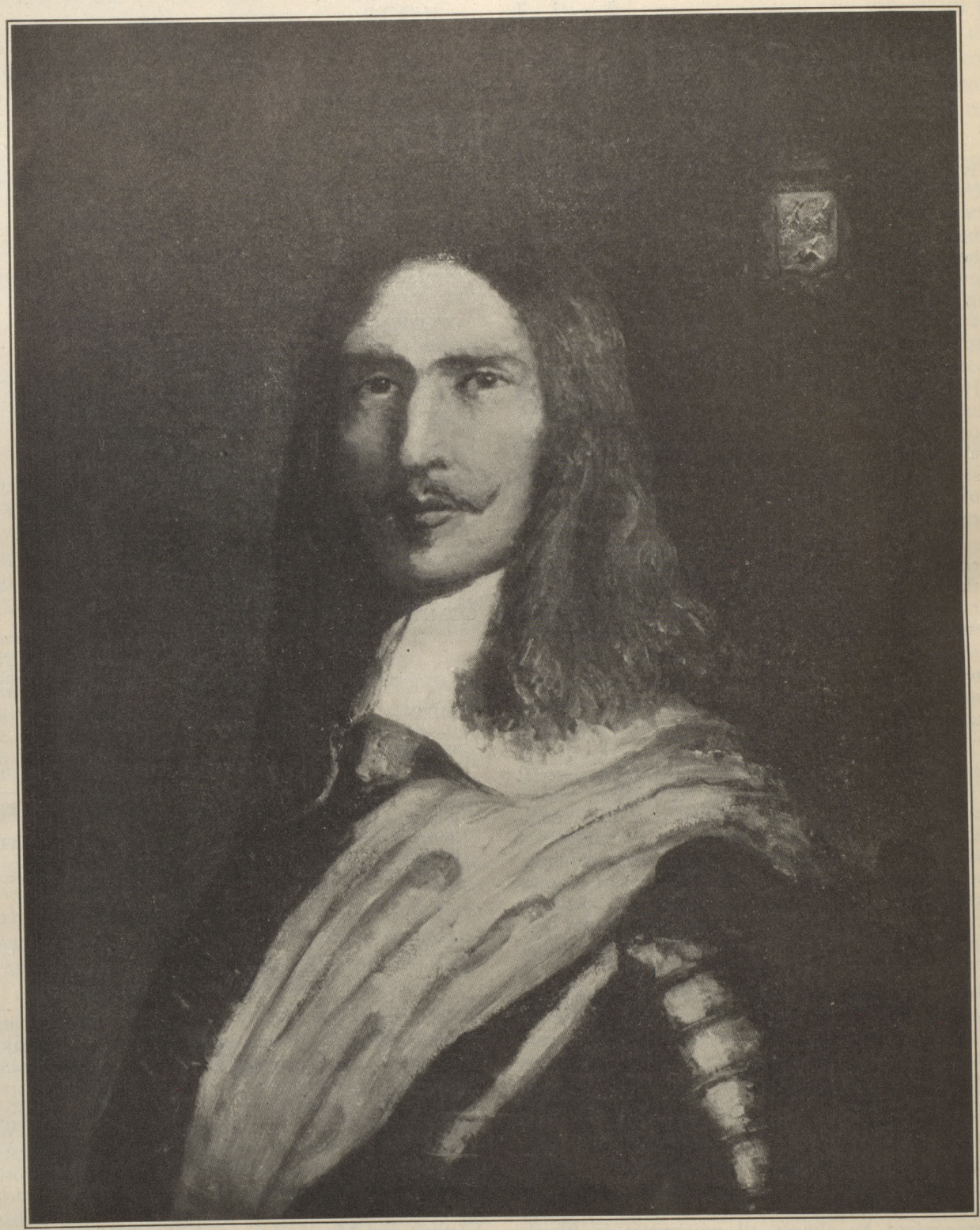
MEN—	Commerce	8	
	Engineering	8	
	Arts	2	
	Architecture	1	
	Non-graduate	1	20
WOMEN—	Arts	7	
	M.S.P.E.	1	
	Non-graduate	1	9
			29

COMPARISON

		This Quarter April-June 1933	Last Quarter January-March 1933	This Quarter Last Year April-June 1932
MEN—	Permanent	16	6	8
	Temporary	4	2	5
WOMEN—	Permanent	7	3	3
	Temporary	2	5	1
	TOTALS	29	16	17
Registrations during the quarterly period		71	84	111
Interviews during the quarterly period		235	222	(no record)

ROYAL EDWARD INSTITUTE

Addressing the Health Division of the Montreal Council of Social Agencies on June 15, Dr. J. C. Meakins, Director of the University's Department of Medicine and Chief Physician of the Royal Victoria Hospital, outlined the work being accomplished by the Royal Edward Institute, now affiliated with McGill. With an augmented staff of some sixteen practitioners, he stated, the Institute was developing new facilities for the treatment of tuberculosis and would provide a clearing-house to which all cases would be referred by the Royal Victoria and Montreal General Hospitals. It was also hoped that the Institute would become a noted centre for research and would provide for McGill medical students a means through which they might acquire a knowledge of the most up to date and efficient methods of tuberculosis treatment and prevention.



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FRONTENAC

Frontenac: Why No Authentic Portrait of Him Exists

By J. DELISLE PARKER

(With two illustrations painted by the author and here reproduced for the first time.)

AS the soft early snows of the winter of 1698 were covering the slopes of old Quebec, the dauntless spirit of the Count of Frontenac passed on. With awe and sorrow the habitants looked up at the lights in the Château St. Louis, as some sixty years previously their fathers had gazed and prayed while Champlain set out on the voyage from which there is no return. One captain had gone to greet the other; and strange as it may seem, neither of these two great figures in an eventful century of Dominion history left, so it is believed, any authentic portrait of himself, by which men could recall his physical likeness. And even the resting places of their ashes are in some degree a matter of conjecture.

However, it is fairly certain that some months after the death of Frontenac, a Recollet priest carrying a little casket entered the Church of St. Nicholas des Champs in Paris. In this casket was the heart of his old friend, Louis de Buade, Comte de Frontenac. The long and perilous winter journey from Quebec, by way of New York, he had made to fulfil the last wishes of the dying governor.

The Church of St. Nicholas des Champs still stands after many centuries, near the Porte St. Martin, and in the days of Frontenac was in the fashionable quarter of Le Marais. Heavy richly decorated coaches and graceful sedan chairs deposited the elegance, beauty, wit, and chivalry of Paris at its doors. There in the Montmor Chapel the casket was laid at the side of the governor's favourite sister, Henriette Marie, Madame de Montmor. Almost a century later, a crazy, drunken mob of the French Revolution invaded the building, defiling and destroying the tombs of the aristocratic families. A recent thorough investigation in the Church by the writer and Dominion officials in Paris revealed no vestige of the Montmor tombs; nevertheless it is regrettable that no tablet recalls the connection of the edifice with the great Canadian governor. Such a spot should be a place of pilgrimage for Dominion visitors to France.

From Frontenac emanated a spirit of rare vigour, directness, common-sense, honour, and fearlessness. Thus it is not difficult mentally to reconstruct a head of much energy, alertness, and restrained passionate temperament. Artists endowed with imagination have for years past been tempted to portray him; and to such an extent does his dynamic personality impose itself on those familiar with his life and deeds that it is often taken for granted that these pictures and sculptures are based on veritable documents. As a matter of fact, probably no authentic portrait exists.

Happily there is an excellent engraving of the favourite sister, Henriette Marie, at whose side he ordered his heart to be laid in the Montmor Chapel. This drawing by Mellan, a friend of the family, is of great importance. That neither Mellan nor the noted sculptor and painter, Bellini, who resided for a time in Paris with Frontenac, rendered an invaluable service to posterity by recording the Count's features is probably not their fault. The restless, energetic soldier, though deeply interested in the arts and letters, was the last type of subject likely to be persuaded to pose quietly during long hours. He would be the despair of most portrait painters, and especially of the painstaking artists of that period.

Assuming that a family resemblance existed between this sympathetic brother and sister, it is obvious that the engraving of Henriette Marie is of great pictorial and historical importance. From what is known of the lady, there was considerable similarity of disposition, and her strongly marked countenance indicates the possession of characteristics shared by her distinguished brother. There is the imperious, determined nose and chin, the quiet commanding look in the eyes, the broad forehead and high cheek bones of the intelligent but passionate nature of the lord who ruled in the Château St. Louis at Quebec.

Frontenac was fifty-two years old when he came to New France. He left behind him a career filled with romance, only to inaugurate another period of eventful deeds lasting over a quarter of a century. The early part of his life has been somewhat overlooked. Yet it is crowded with adventure for, as the colonel of a crack

fighting regiment, he was almost constantly on active service in foreign parts. This service was varied, during brief spells of peace, by episodes in Paris which included amorous affairs with the famous Madame de Montespan, who later became the King's mistress, and with "La Divine," the lady whom he clandestinely married when she was but sixteen years of age.

As the husband of a lady renowned for her beauty, intelligence, and influence, and also as the brother of Madame de Montmor, whose home was a rendez-vous of many men famous in the intellectual world, Frontenac mixed in Parisian society. It was, moreover, a society in which practically everyone of renown followed the custom of having his features perpetuated by a painter of distinction. Why this handsome and dashing soldier was not immortalzed on canvas, therefore, presents an interesting problem.

An explanation of this mystery and of why the Dominion has been deprived of an original picture of perhaps its greatest governor under the old régime is to be found, perhaps, in a brief review of the Count's life and character. His restlessness, his insatiable love of action, and his domineering power early stamp his career. Beginning in routine fashion as a young officer at the age of seventeen, in the course of a few years he saw action in Flanders, Germany, Spain, and Italy. At Roses in Spain and more notably at Orbitello in Italy, the young colonel led his Regiment of Normandy to victory. In the latter battle, Frontenac had his arm broken; and his regiment beat back four times its numbers of Neapolitan troops trying to break through the forces besieging the town. Altogether both the Normandy Regiment and its youthful commander covered themselves with wounds and glory. Incidentally, Prince Thomas of Savoy, founder of the historic Regiment of Carignan-Salières, fought in the same army with thefuture governor of Canada.

Sixteen years later Frontenac and the Carignans were again to advance on another European battlefield, before crossing the Atlantic to face the Iroquois. Thus, while fighting the Turks in the plains of Hungary, the Count, now a hardened veteran, again had a preliminary contact with Canadian history. The story of the Carignans has already been related in the pages of *The McGill News* (December, 1931). Hence it is only necessary to mention here that they crossed the seas the year after their sanguinary victory over the Turkish forces at St. Gothard, fought two successful campaigns against the Iroquois, and remained, at the king's request, to form a most important factor in the early colonization and defence of Canda. Seven years after their arrival, Frontenac himself landed at Quebec.

Thus, by a curious turn of the wheel of fate, the future Governor first met on a battlefield in Spain, and again a little later in a desolate region bordering Russia, many of the officers and men he was to command in distant Canada. In Hungary they valiantly fought a fierce and sallow-hued foe of Asiatic origin. In later years the Count and the Carignans met with equal courage the redskins of the Five Nations on the other side of the globe. To the Carignans, become Canadian settlers and militia, Frontenac was not only the Governor of New France but a tried and veteran companion of the battlefield.

However, during the first few years in which his old comrades-in-arms were becoming good citizens in Canada, Frontenac was participating in a last crusade against the infidel Turk, who for years had been hammering at the gates of Candia, on the Island of Crete. Returning to Paris after a strenuous campaign, Frontenac was obliged to dally for some time, awaiting the pleasure of his sovereign from whom he sought further active employment. Ultimately, thanks largely to the energetic efforts of his wife and friends, he was appointed to the governorship of Canada.

From this rapid survey of the thirty odd years of service preceding his first departure for Quebec in 1672, it is possible to obtain a mental vision of Frontenac and appreciate the influences that modelled his character for his greater work on our soil.

It is in the period of the return from the expedition against the Turks at Candia that the writer has placed the portrait accompanying this article. The Count was at that time in the maturity of middle age, full of ambition and energy and possessed of a broad comprehension of men and affairs. The style of the painting was influenced by portraits and engravings of contemporaries and, although imaginary, is based on considerable fact. In the sunburnt countenance of Frontenac, with his hair and moustache slightly grayed, and in the general appearance, an effort has been made to portray the distinct professional military stamp of the early part of the reign of Louis XIV. Many of the same characteristics can be seen in the pictures of his fellow-officers, such as Turenne, Condé, or Duquesne. He is garbed in the part armour and broad scarf worn by the marshals and generals of France of those days on ceremonial occasions and in which they almost invariably arrayed themselves for their official portraits. Following the contemporary custom, his coat-of-arms, three griffin claws on an azure background, and his name and title are



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THE RETURN OF FRONTENAC TO CANADA

On October 15, 1689, about sunset, the Comte de Frontenac returned to Canada, landing at Quebec, where he was welcomed amid scenes of great rejoicing.

indicated on the top of the canvas. In short, the portrait is an effort to represent Frontenac as he probably looked in the prime of life and is executed in the manner of the seventeenth century painters.

The previously mentioned engraving of the Count's sister, Henriette Marie de Buade Frontenac, later Madame de Montmor, was a precious document in this reconstruction. Behind her expression of feminine charm and grace, there is the suggestion of a keen sense of humour and a certain affability. If Frontenac was a great pioneer governor in the new world, it must be remembered that Henriette Marie was the capable companion and wife of one of the first members of the newly-founded French Academy. Many early meetings of this pioneer body in literary and scientific circles took place in the Hôtel Montmor.

Though, presumably, no contemporary painting of Frontenac exists, there is a remarkably fine one of his wife, Anne de la Grange, which still hangs in that palace at Versailles where the fretful Count passed so many disconsolate hours in waiting for an outlet to his energy. The Count met her when he was thirty years old and the brilliant young colonel of the Regiment of Normandy. At sixteen, she was practically carried off by the impetuous determined soldier lover. After many adventures they were married, somewhat à la Gretna Green, in a small church near Notre Dame where too many questions were not asked. Unfortunately, the romantic marriage was not entirely successful and, although she remained a loyal friend in spite of their separation, the Countess never came to Canada.

In her portrait she is appropriately shown in the martial helmet and classic costume of Minerva, for this beautiful and captivating lady had a military career of her own. In the revolt of the Fronde against the youthful Louis XIV, and more especially against his unpopular minister, Mazarin, she bacame a "Maréchale de Camp." It was her great friend and leader, La Grande Mademoiselle, who turned the guns of the Bastille on the advancing royal troops, including the Carignans. A few months later, when the King's regiments marched into Paris, Mademoiselle sought refuge and hiding in the home of Frontenac's sister. Refused hospitality by other friends on that anxious October night of 1652 and coldly received even by her father in the Luxembourg Palace, the plight of the fair Amazons was distressing when they knocked at the gates of the Hôtel Montmor. In later years all was forgiven and Madame de Frontenac played a considerable political rôle both at Court and in Paris, notably on behalf of the Governor.

Although the Countess lived only a short while with her soldier husband, friendly relations were maintained and letters exchanged. After her rupture with the Count, and later after her breach with La Grande Mademoiselle, which created a great furore in Parisian society, she was somewhat adrift and homeless. The poverty of the Frontenacs for persons of their rank was well known, in spite of efforts to give a contrary impression. The Count lived on the Quay des Celestins in a small mansion, still standing but now chiefly a garage, adjoining the magnificent Hôtel Fierbet. A few hundred yards away in the Arsenal lived the Countess to the end of her days, surrounded by a brilliant circle of friends and in an atmosphere of sparkling conversation typical of the great literary salons of the seventeenth century. In a recently published volume, "Le Roman Français de 1660-1680," Miss Dorothy Dallas, a Canadian authority on this period, gives an excellent picture of the literary activity which influenced the social and intellectual life of the times.

Though the Countess, known as "La Divine," was one of the best known of the fair Précieuses of the fashionable quarter of the Marais, she rarely frequented the Court at Versailles, but her influential connections were invaluable in protecting Frontenac in far away Canada. When in Paris, the Count would sometimes cross the road from his house on the Quay des Celestins and join in the brilliant salons of his wife. For although a man of action, Frontenac had a high regard for literary innovations and first produced in Canada the works of Molière. In regard to the influence of the Countess in the matter of his appointment as Governor, the scandal-mongers have had an excellent theme, unsubstantiated by evidence. It was in fitting recognition of her services that the Canadian explorers first called what is now the Illinois River, "La Rivière de la Divine." The well-known story of her refusal to accept the heart of Frontenac when brought to her in Paris some months after his death at Quebec and her reputed remark that she did not want it because she never in life had possessed it are both legends probably concocted by enemies.

Frontenac's service in Canada lasted in all some twenty years, with an interval of seven years spent in France. If an artist had depicted the Count in his old age, the portrait would undoubtedly have revealed the face of a man sad and careworn but still energetic and strong-willed. For to the hour of his death, Frontenac, like his gallant contemporary, Cyrano de Ber-

gerac, kept his "panache." His grandfather had followed the waving plume of Henry of Navarre, his father had led the Regiment of Navarre, and he himself was ever an inspiration to his Canadian followers battling the Iroquois.

From the beginning to the close of his career, troubles which would have broken the spirit of a less heroic nature assailed him. Among these was the loss of his only son. Soon after he arrived in Canada, he learned that the last of his race had perished. It was an irony of fate that he himself had presided at the High Council which had declared the war on Holland in which the young Frontenac had been slain. As he had prepared for his own departure for Quebec, his son had marched north with his regiment. This was a unit raised by the Bishop of Munster and probably included many Scotch and Irish volunteers. The young officer fell in action near the village of Estune, in Flanders. Around him were men of those French, English, Scotch, and Irish origins which were to constitute the main racial stocks in the colonization of the Dominion. Months later the sad news arrived in Quebec. Surrounded by his staff and dignitaries, the Governor heard the funeral oration of Father Eustache Maupassant in the Cathedral and heard simultaneously the bell dolefully tolling the knell of the last generation of the Frontenacs.

The recall of the Count through the machinations of his rivals and enemies, with a period of resulting chaos in Canada, found a fitting aftermath in an historic scene at Versailles when Louis XIV addressed Frontenac before the Court as follows: "I send you back to Canada where I count on you serving me as well as you did before: I ask of you nothing more."

The moment of vindication had come; and his return to Canada was to be permanent. On July 26, 1689, he embarked at La Rochelle and, after an extraordinarily long voyage of eighty-two days, reached the country he loved so well and where he was to die ten years later.

An accompanying illustration shows the momentous occasion of the return of the great governor, then in his seventieth year. An eye-witness has left an invaluable record of the greatest tribute, perhaps, ever accorded to a man landing on Canadian soil:

"The new Governor arrived at Quebec the 15th of October, landed about eight in the evening and was received with torchlights by all the townsmen as well as those in the harbour, by the Supreme Council and all the inhabitants who were under arms. Three volleys of cannon and of musketry were fired and the firing was accompanied by illuminations in all the windows of the town. . . He is adored by everybody and they call him 'Redemptor Patriae,' a becoming title since according to all the inhabitants of these colonies all was in chaos, in confusion and poverty when he first came to Canada. The Iroquois had burnt all the farms and slain thousands of French. . . in a word New France was infallibly about to perish if the new Governor had not brought about peace with these barbarians."

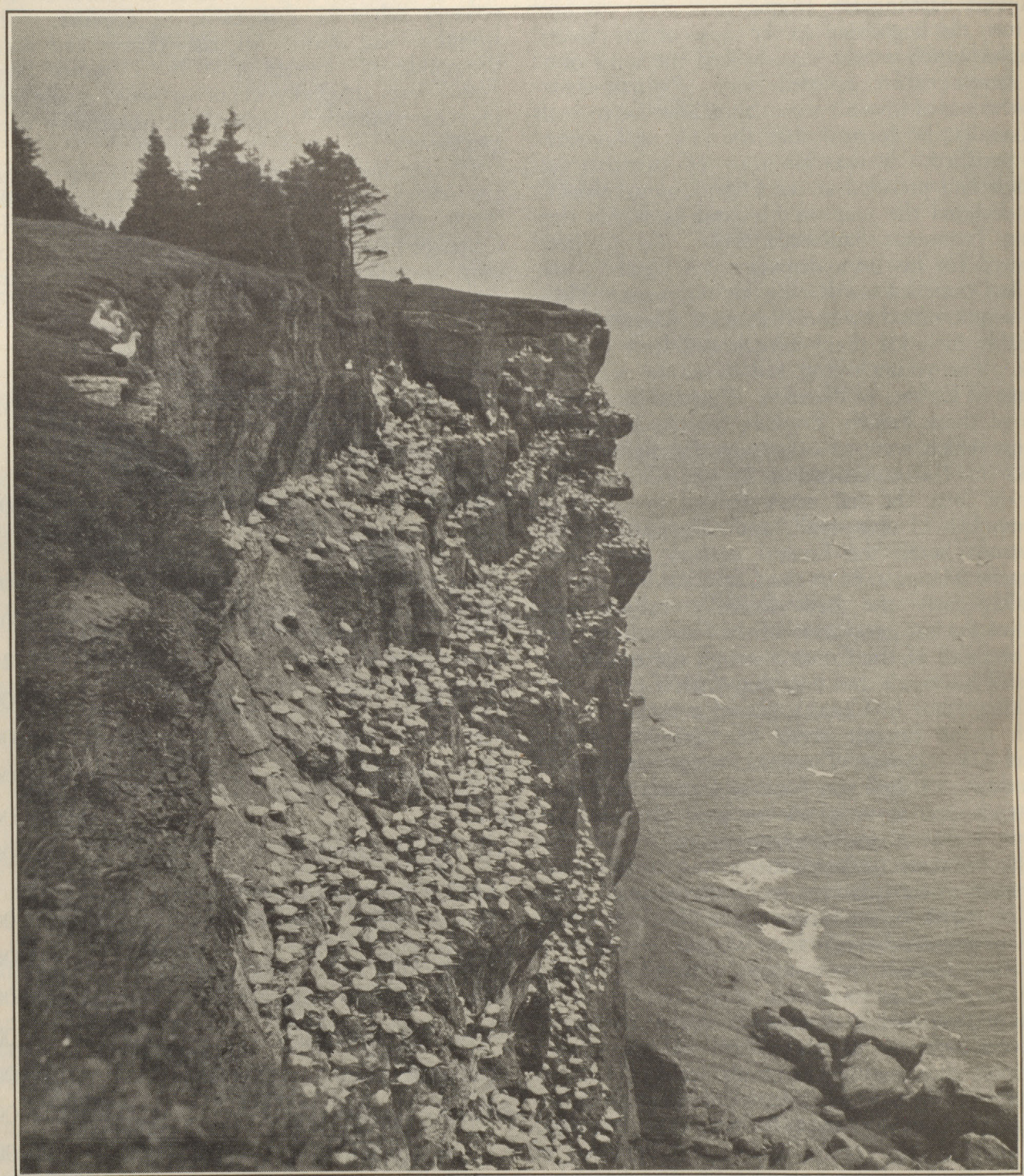
History has fully justified the glowing tribute, and with it one can close this attempt to describe briefly the life, family, and character of the Count of Frontenac and to give some explanation why imaginative paintings must replace any authentic portraits of him.

SUBSCRIPTIONS TO McGILL ALUMNAE SCHOLARSHIP FUND

May 1st—July 1st, 1933

Class of 1904	$ 5.00
Class of 1913	18.50
Class of 1915	30.00
Class of 1917	5.00
Class of 1925	12.20
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Miss Hazel Murchison	5.00
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Mr. P. D. Ross	50.00
Mrs. F. E. Wright	5.00
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GANNETS NESTING ON BONAVENTURE ISLAND

The gannet has less than twenty breeding locations, among which Bonaventure Island is one of the most important. Nearly a thousand birds appear in this photograph.



SWOOPING FOR SCRAPS ON THE WATER

In this photograph, Herring Gulls and Greater Black-backed Gulls are seen eagerly accepting food thrown out for them.

Bird-life on the North Atlantic

By V. C. WYNNE-EDWARDS

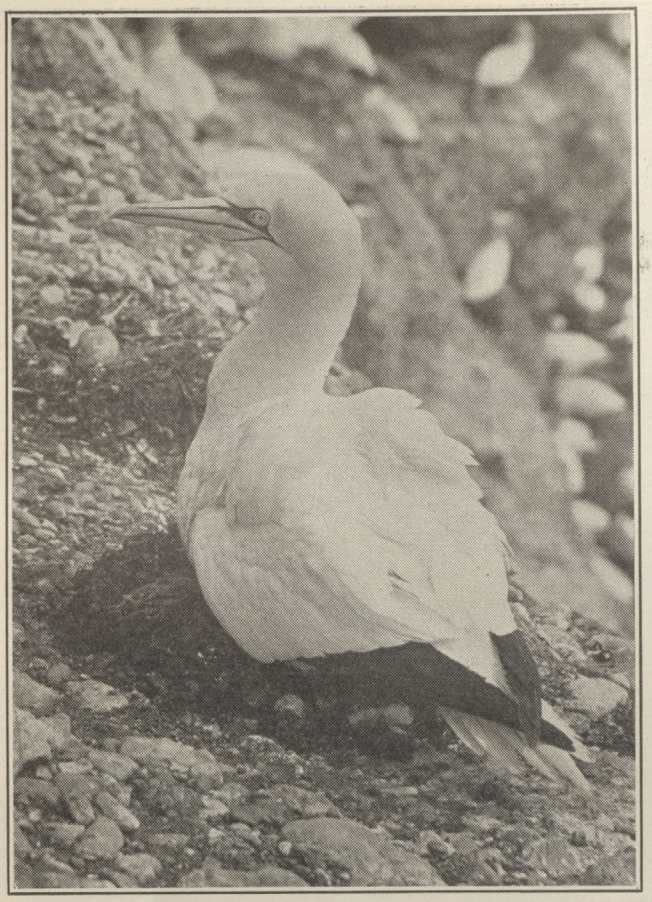
(Assistant Professor of Zoology, McGill University)

(With Photographs by the Author)

SEA gulls are coastwise birds. Like small boats they travel far on inland waters, but at sea they keep in touch with the shore. With the exception of the kittiwake, one of the smaller species, they have no claim whatever to be called oceanic, because they seldom fly further out than they can return the same night. There are even some gulls in North America which migrate a thousand miles from summer to winter quarters without tasting salt water once in their lives. To them the oceans are barriers, separating kind from kind, instead of being highways as they are to the real sea birds; indeed, of the nine species of gulls which breed on the two sides of the Atlantic from the Arctic Circle to the latitudes of New England and of France, only two are common to east and west, exactly alike on both shores. Of these two, one is the kittiwake whose habits do not befit a gull, and the other is sufficiently northern to use the so-called Arctic air route, and could probably travel by way of Labrador, Greenland, and Iceland to the European coast. It is a mistake to suppose that gulls follow ships right across the Atlantic; they do not, nor actually do any other birds.

Cormorants are similarly distributed; one out of three species is common to both sides. This one is likewise the most northern of the three, now rare in North America, breeding in a few places on the north shore of the Gulf of St. Lawrence and in Labrador and Greenland; but it is improbable that traffic any longer proceeds between Canadian and European colonies. Gulls and cormorants are part of an *inshore* community of sea birds, most evident to the visitor at the seaside but rightly regarded by sailors as heralds of imminent landfall.

Proceeding to sea, one soon comes upon different birds not far offshore, whose limits extend out to the continental edge. They belong to the fishing banks and narrow seas and breed in myriads on the shores of Newfoundland and the Gulf, as well as on the British coasts. Here also there are two families, auk and gannet, of which the latter, a white bird as big as a goose with rigid black-tipped wings, allied to the pelicans, is the sole representative of its kind in northern waters. The gannet is a singular bird; it



THE GANNET

This bird, allied to the pelicans, is the sole representative of its kind in northern waters.

has less than twenty breeding places altogether, in some of which, for example Bonaventure Island and the Bass Rock (Firth of Forth), there are many thousands of birds. Its food consists mostly of such shoaling fish as herrings, for which it plunges like a bolt from a great height, raising a spout of water visible a mile off. It soon bobs up to the surface again, and although on a few occasions an odd bird has been caught in fishing nets, apparently at a considerable depth, it does not habitually swim under water.

The auks are completely different. There are six species living round the North Atlantic, variously called murres or guillemots, razorbills, puffins, and dovekies. They are black above and white below, with short wings adapted for flying under water as well as in air. They are smaller than ducks, except the extinct great auk which a hundred years ago swarmed on both shores of the North Atlantic from Newfoundland to the Hebrides, until it was ruthlessly exterminated by man, at first for victualling ships and afterwards for its feathers. Its wings were flippers and it could not fly; it was the original penguin, an old celtic name later transferred to the similar but entirely unrelated birds of the southern hemisphere and replaced by the nordic name of garefowl, under which it is universally known from Charles Kingsley's story.

The auks are sufficiently aquatic to have lost the ability to rise off flat ground. That is one reason why they nest on steep cliffs and islands, where they can fall off into the air. They chase their food under water, flying like sea-turtles with their wings and using their webbed feet as rudders. The same species occur on both shores, but in three cases isolation is of such long standing that, with the birds in the hand, one can recognize British and Canadian races. They are essentially northern or sub-Arctic, which accounts for their wide range, because they do not cross the ocean any more than gulls. One of them, the dovekie or little auk, a bird about the size of a starling, is more pelagic than the rest, in the same way that the kittiwake is exceptional among the gulls.

In deep water, fishes become scarcer. The dovekie is able to live far out to sea because, being too small to eat large fish, it is satisfied with plankton. Plankton is a collective name given to all those countless small creatures, both animals and plants, which have device or strength enough to fight gravity and keep in the sun, but no energy left over to move from place to place. They just drift along in the ocean currents. Plankton is found only near the surface, because light does not penetrate very far into water and the microscopic green plant-cells which are the ultimate source of food in the sea need light to live. Below half a mile deep it is eternally dark even to the most sensitive instruments; but plants cannot thrive below fifty fathoms. In the surface layer, however, conditions are so excellent that the annual production of living matter per acre exceeds anything attained on land. The sea is by no means the barren and desolate place it appears from the deck of a ship three days from shore.

To exploit this fertility, representatives of all the chief groups of land animals have gone back to marine habits. Those which lay eggs, like birds and turtles, must go ashore to breed, although the turtle stays only long enough to bury its eggs on the strand and hurry back to sea. The whales and porpoises alone are perfectly independent of land, able to bear and suckle their young in the water. Whether they be mammals, birds, or reptiles, they have solved many of the same problems, one of which is the physiological difficulty of drinking sea-water, brought to my attention by Dr. Douglas Ross. Without doubt

the most mysterious is orientation, or sense of direction and locality. It is one of those problems which continue to defy experimental analysis, but which perhaps we may ultimately solve "through the accumulated record of small details, compared and checked by many witnesses through long years of watching," in the words of the naturalist and explorer, Dr. T. G. Longstaff; and this is the chief reason for seeking exact knowledge of the movements and behaviour of these animals at sea.

The dependence of pelagic birds on plankton has been beautifully shown by Dr. P. Jespersen, a Danish biologist, who accompanied the late Dr. Joh. Schmidt on his romantic cruises in the Atlantic and Pacific oceans searching for the birthplace of eels. By the rough method of counting the number of birds seen each day he discovered an intimate relation between their presence and the abundance of plankton which was more accurately measured as part of the ship's routine. But neither he nor any other ornithologist has ever gone back over his tracks systematically to compare month with month and season with season. It was chiefly to do this that I planned this summer. I wanted also to confirm my idea that the different families of birds are specialized to different zones of activity, to find out in fact the exact extent of the seaward wanderings of auks and gulls and the landward wanderings of pelagic petrels. To a great extent my requirements are well filled by ordinary trans-Atlantic crossings, of which I have made two in each direction at the time of writing this article, and have the same number still to make before the end of September. I am glad to have an opportunity to thank Dr. C. F. Martin and Mr. Eric Reford for the help they have given me in making the necessary arrangements.

Beyond the fishing banks and out over the deep water live some of the most highly specialized and extraordinary of birds, belonging almost exclusively to a single group called the *Procelariiformes*. They vary enormously in size, from the largest wandering albatross with a sail-spread of fourteen feet to the tiny swallow-like storm-petrels whose stretched wings would not span fourteen inches. Except that none of them are brightly coloured, the ninety-odd species present the greatest diversity in appearance. The most familiar in the North Atlantic is the fulmar, a bird smaller than a herring-gull but similarly coloured, which follows ships and is responsible for the misconception about gulls I have mentioned already. Like other shearwaters it glides perfectly on rigid boomerang wings, now rising and falling on the air-swell, now banking over at a high angle as it luffs up into the wind with one blade almost cutting the water. Petrels and shearwaters (more or less synonymous terms) are great travellers, performing longer migrations than any other birds. Among them are several southern species which, when breeding is done, go north across the equator for the winter, indifferent as to which ocean they choose because of the monotonous sameness of all the high seas. In our summer the North Atlantic is invaded by countless thousands of wintering greater shearwaters and Wilson's storm-petrels which return to breed at Christmas on Tristan da Cunha and other remote southern shores. Sooty shearwaters visit our latitudes each year and are found as well in the Pacific as far north as the Aleutian Islands, and in the Indian Ocean, but they breed only in the New Zealand group. Their migrations are almost unparalleled in length; and though trans-equatorial migrations of northern-breeding species, including swallows, plovers, and humming-birds, are far too common-place to number, the reverse process is excessively rare, being almost confined to these strange pelagic birds.

Their breeding-habits are no less astonishing: they seem to grudge their remaining terrestrial link, and by preference resort to the most lonely and distant oceanic isles to breed, as St. Kilda, Kerguelen, the Azores and Galapagos. Ashore almost all of them are nocturnal. They nest in burrows and one searches for them by smell, which is highly characteristic and clings to dried skins for years. The storm-petrels suggest cod-liver oil, which is not strange since they get first hand what the cod acquires by eating the food which ate the plankton, whence the oil and its vitamin-D proceed. When surprised in any way they vomit a red or golden odorous fluid, and to this is due the popular belief among sailors that albatrosses rapidly become sea-sick on the deck of a ship. A month ago I was awakened at four in the morning by a newly captive Leach's storm-petrel fluttering on my face, probably a unique experience which has cost the Cunard Company a bed-spread.

They are unusual in many other ways. Some of them incubate their single egg for seven weeks, an unchallenged record of endurance, and then as as if in contrast to this vigilance they leave the fatted chicken alone for days on end before it is finally fledged, until at last hunger drives it to sea on its own account. They differ from all other birds in making their annual moult in mid-winter.

Pronounced scepticism as to the existence of birds in mid-ocean is frequently expressed, but this should already have been dispelled. The actual number of birds seen of course varies greatly; my own record is four hundred and eighty in twenty minutes (long. 30° W.), but at times the average has fallen as low as one per hour, though only when conditions were particularly adverse. Unless there are so many birds in sight that I have to resort to estimates, I score each bird as it is seen. This works well for the majority of species which take no notice of the ship except to fly away if she comes too close; but there are some, notably fulmars, storm-petrels, and gulls, which accompany the ship for their own reasons, which I am about to describe. Of these it is best to take a count at specified intervals. In this way the observations become quantitative, and though the figures have no absolute reference to population in terms of birds per unit area, they are at least comparable from day to day or month to month, since the conditions under which they are made are varied as little as possible.

Identification of birds at sea is at first bewildering, for though the petrels sort themselves out readily into sizes, those of the same size are apt to appear exactly alike until one learns what to look for. The three storm-petrels of the North Atlantic, more generally known as Mother Carey's chickens, are probably the most difficult. They are small sooty-black birds with a white patch on the rump. In the books, Leach's is said to be slightly larger than the other two, and to have a dusky line through the centre of the white patch; its tail is slightly forked. Wilson's and *Hydrobates* are smaller and blacker, Wilson's having yellow webs between its diminutive black toes, and *Hydrobates* a whitish patch below the wing. Such characters would be admirable if one could catch the bird, but are virtually impossible to make out at a distance of two hundred yards from the moving deck of a ship, even with the best of binoculars. After a time I had all three separated by their flight: the first never left the wake of the ship for more than a few moments; the second, on the other hand, played around the bow and had the most erratic aerial flight; the third flew more directly and glided like the larger petrels. But to discover finally which was which took more than one hundred hours of watching.

I have often been asked where the petrels sleep. Since they spend eight months of the year out of sight of land, this question is soon answered. They must suffer some privation in storms, although they make no special attempt to resist them, being content to be carried five hundred miles to leeward rather than exhaust themselves in a vain attempt to breast the gale. In such times they rest as much as possible, which is little, on the water. They avoid fog, often concentrating on the edge of a fog bank in astonishing numbers. Ships are to them unusual phenomena encountered only in narrow lanes at infrequent intervals. Some species like the fulmar and *Hydrobates* follow astern for a few hours at a time, but never for two days consecutively as is often supposed; there are actually two authentic cases of albatrosses having done so in the far south. Gulls are by nature scavengers, and habitually follow ships for their discharge of scraps and refuse. Petrels may on occasion take something of this kind, but chiefly they are interested in the plankton killed or churned up by the propellors, which wells to the surface about two hundred yards astern. That is why petrels never fly over the decks as gulls do, watching the outfall from the galley. There may also be some element of play in their behaviour. Greater and sooty shearwaters follow schools of whales and dolphins more often than ships, though I am uncertain of the exact reason.

The most interesting observations I have made have to do with migration at sea. There are several Old World land birds which breed regularly in Greenland, and one, the Greenland wheatear, which after crossing the Arctic stepping-stones turns south-west to Labrador, a migration sometimes thought to survive from very ancient times. On May 10th one of these birds alighted on deck about seven hundred miles from land, apparently intent on making the journey from Ireland to Labrador at a single flight. It was probably in error and would never have arrived. A pair of European widgeon, on the other hand, seen near the same place, had a good chance of doing so, although these ducks often lose their way in autumn and appear on the New England coast. Such occurrences of land-birds far out to sea are interesting, but they are highly abnormal, to be regarded more as accidents than as part of the regular course of migration.

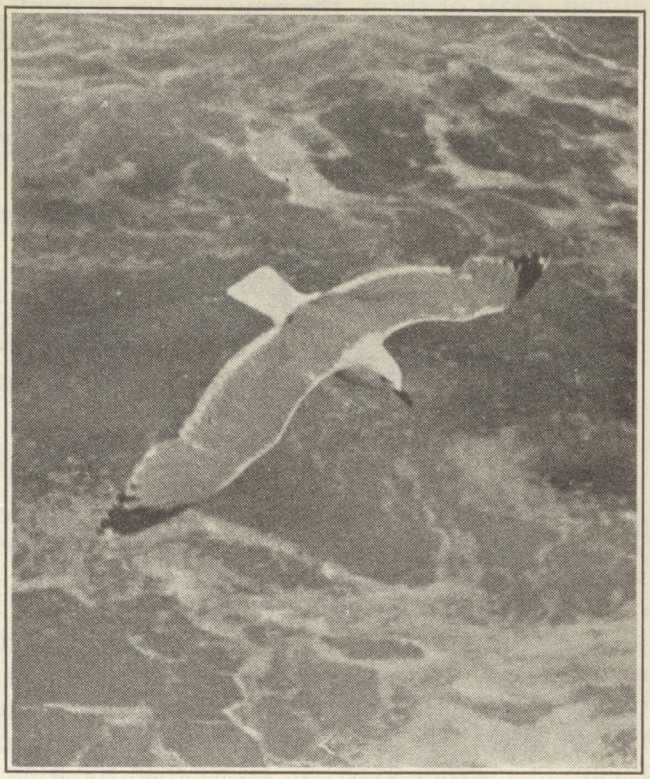
There are, however, some birds besides petrels which habitually migrate up the oceans on their way to Arctic breeding-grounds. I saw in the spring this year, apparently for the first time, flocks of the three kinds of skuas or jaegers passing northbound for days on end. Normally these birds are solitary hunters, the hawks of the sea, chasing petrels and terns till they disgorge the contents of their stomachs, which the jaegers then eat, not infrequently intercepting the meal

in mid-air as it drops towards the water. Jaegers are fairly closely related to gulls and terns, but they are brown instead of white, and characterized by a great variability of plumage among adults of the same species. They have what are called light and dark phases, quite independent of age or sex. The dark phase of the long-tailed jaeger is so rare that no specimen exists in any museum in the world, and I consider it very fortunate to have seen one dark individual in an exceptionally large flock of a hundred and fifty birds of this species.

Then, too, there are phalaropes, little shore-birds like peeps or sandpipers but differing from them in having lobed toes to help them to swim, and from almost all other birds in having a reversed courtship. The female is brightly coloured, far more so than the male, who plays second fiddle in all reproductive activities, even having imposed on him the entire responsibility of incubating the eggs, in which his mate takes no part. She passes her time with others of her sex carelessly ignoring family duties. Julian Huxley finds it shorter to say that the male bird lays the eggs.

Until recently no one knew where these birds passed the winter; but it now appears that though essentially terrestrial in summer, breeding on the Arctic tundras, in winter they are pelagic, re-sorting like eels with uncanny precision to the same uncharted spot. They migrate up the high seas also.

To me, however, the most interesting of the ocean migrants are the arctic terns, graceful long-winged swallow-tailed birds, which are near relatives of the gulls, and renowned for the immense distances they travel between summer and winter. They run a close second to the sooty shearwater, if not sometimes outflying it. Though they have webbed feet they alight rarely on the water, plunging like gannets for their food and rising immediately. In common with most other far northern birds they are circumpolar, equally at home in Baffin Land, on the Mackenzie delta, or the Siberian islands. There is no doubt that some Canadian-bred birds on migration cross the Atlantic from Labrador to the latitude of France and there join their European cousins on their journey south to Africa and perhaps even further to New Zealand for the winter. It was in September three years ago that I first saw the flight in this direction, and last June I found them coming back, although in much smaller numbers. One of the sights to which I most look forward on my last two crossings next September is the tern migration. Its course and direction are



THE HERRING GULL

This is the gull familiar in all the Laurentian lakes. The European and American species are distinct.

unique; and it is the more extraordinary because of over two hundred birds seen *en route*, none ever stopped to feed or ever alighted on the water. Three times I have seen single birds standing on floating wreckage, and once one which tried in vain to keep its balance on the masthead truck. With a fair wind they would make the eastbound crossing in a day and a half; but going the other way against prevailing contrary winds the journey might easily be prolonged for three or four days and nights, demanding rather striking qualities of endurance.

It is highly characteristic that all the birds found regularly far out to sea have most wonderful powers of flight. Either they are light and graceful with easy springing flight, like the terns, storm-petrels, and jaegers; or else they are adept at sailing, in which none excel the immense albatrosses or the smaller but more strongly built shearwaters. Neither of the latter can walk erect without great difficulty; indeed, the burrowing species shuffle along with the whole length of the leg or "tarsus" flat on the ground, from which they cannot rise in flight. In these respects they parallel the most aerial of birds, namely swifts. They dive seldom and probably to no great depth. Whereas the birds of the "offshore zone," auks, diving-petrels, and penguins, tend to let flight take second place to swimming and

diving, some of them, the penguins for example, are incapable of flying at all. I have heard them not inaptly described as "not really a bird at all, but a kind of bird-fish, same as a whale is an animal-fish." They obtain their food chiefly from the sea-bottom in shallow water and need perform no long migrations since their breeding and winter feeding quarters adjoin. These facts go far in explaining the zonal distribution of birds at sea.

The Master Gland

By DAVID LANDSBOROUGH THOMSON, Ph.D.

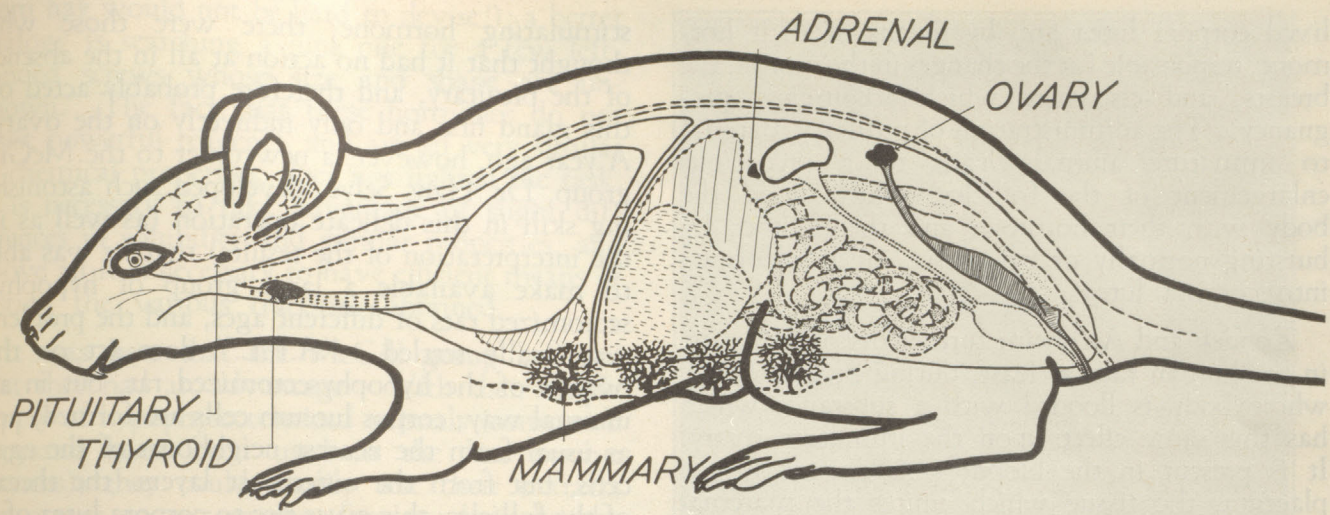
(Associate Professor of Biochemistry, McGill University.)

IT is now widely known that there exist in the body organs whose function it is to produce specific chemical substances, the so-called "hormones," autogenous drugs or chemical messengers which, carried by the blood, stimulate and regulate the growth and activities of other tissues in distant parts of the body. Indeed, to the lay mind, the word "gland" suggests these organs of *internal* secretion, rather than the more typical glands which discharge their products to the surface of the body or to the alimentary canal, such as the sweat glands and the salivary glands.

Everyone knows the name at least of the thyroid gland, whose hormone plays a part in the burning of foodstuffs in the body comparable to the part played by tetra-ethyl lead in the explosion of gasoline; hence the sluggish circulation, the ill-nourished coarse skin, the mental torpor of the patient whose thyroid is not sufficiently active, and conversely the feverish nervous instability, the over-worked heart, and the emaciation of exophthalmic goitre. Less familiar is the adrenal cortex, whose hormone is, in some way not clearly understood, essential to life; when this gland is removed experimentally or destroyed, usually by tuberculosis, in Addison's disease, the blood becomes thick and the circulation fails, the muscles are weak, the body loses its resistance to infections and other emergencies. It has been known for centuries that removal of the male sex glands not only produces sterility but also has repercussions in other parts of the body, converting the vociferous cockerel into the indolent capon, the aggressive bull into the docile ox, and so forth; and from similar evidence it may be concluded that the ovaries of the female also have a double function, producing specific hormones as well as nourishing and duly liberating the living egg-cells.

Other examples of hormone-producing organs are the parathyroid glands, the adrenal medulla, and the pancreatic islets. In some instances our knowledge of the chemistry of the hormones is practically complete, so that they may be produced synthetically in the laboratory; in others it is rudimentary and has not even got the length of complete separation from accompanying impurities. Similarly our knowledge of the physiological function of the hormones varies from one case to another, and from one aspect to another; in particular, until very recent times, we had only hazy ideas of the manner in which the activity of the hormone-producing glands themselves was regulated, and of the mechanism by which interference with one of these glands produces, as it usually does, disturbances in the functioning of the others. The solution of these problems, which recent research has partially supplied, is the subject of this article.

This concerns the pituitary body, or hypophysis. Its chief part, the anterior lobe, arises in early development as a small pouch in the roof of the mouth cavity, which grows upwards to come into connection with a projection from the floor of the brain. Later, the connection with the mouth is lost, and the pituitary nestles close to the brain in a saddle-shaped hollow on the inner surface of the thick bone which forms the floor of the skull. A more inaccessible position could hardly be devised; and for many years attempts to remove the pituitary led to contradictory results, because they were made from above and inevitably produced more or less injury to the brain in the animals that survived. Some five years ago, however, P. E. Smith devised an operation for removal of the pituitary (hypophysectomy) in the rat, which was relatively easy and did not injure the brain. He approached the gland from below, from under the chin, passing through the back of the mouth cavity (in spite of the difficulties which that involves



A FEMALE RAT

In this drawing, by the author of the accompanying article, the positions of the principal glands are clearly shown.

in maintaining the animal's breathing and in administering the anaesthetic) to drill through the floor of the skull into the depression in which the pituitary lies. It should be remembered that the rat's pituitary is not much larger than the head of a pin. The results of Smith's work were clear-cut; removal of the pituitary led firstly to cessation of growth, so that the animals retained for months their size at the time of the operation; secondly to degeneration of the thyroid gland, for lack of whose hormone the rate of burning of foodstuffs in the body was greatly slowed; thirdly to degeneration of the adrenal cortex, so that the animals became weak and unable to resist poisons or infections or cold or other buffets from the environment; and fourthly to atrophy of the sex-glands, so that the animals became sterile and the secondary sexual characters became less distinct. This may be compared with the cases, fortunately rare, in which the pituitary is largely destroyed by disease (Simmond's disease): thus a girl of nineteen, recently a patient in one of our hospitals in Montreal, had the stature and sexual development of a child of twelve; yet showed the coarse skin and facial lineaments of senility (thyroid atrophy); was extremely weak and perpetually complained of cold (adrenal cortex atrophy); was feeble-minded and, because the optic nerves lie close to the pituitary, practically blind.

Although Smith's was a pioneer research and a turning-point in our knowledge of the hormones, some of his results could have been predicted from previous work. Thus Evans in California had produced giant rats by injecting them with a crude pituitary extract; others by similar treatment had stimulated the thyroid gland in tadpoles and thus caused them to change prematurely into little frogs; and in 1927 Smith and Engle in New York and Zondek and Aschheim in Berlin independently demonstrated the possibility of stimulating the sex-glands to precocious activity by the administration of pituitary material to immature rats and mice.

The future egg-cells in the ovary lie in little nests of supporting and nourishing cells. These nests are called "follicles": in the immature ovary they are small and compact, but at the age of puberty they begin to grow—ten or twelve at a time in the rat or mouse, one or two at a time in the human female—and become large and hollow, and eventually burst, setting free the egg-cell either to perish or to be fertilized and give rise to a new organism. Meanwhile the cells of the follicle multiply and enlarge and form a compact mass, invaded by blood vessels and laden with yellowish fat, known as a *corpus luteum* or yellow body; and sometimes it happens that this change occurs before the follicle has burst, and the egg-cell is permanently imprisoned by these fat-laden cells, a process known as *atresia*. It is not necessary here to go into details; suffice it to say that the cells of the follicle secrete one hormone (oestrin) during the stage of development, and then change their function and produce another hormone when they become a corpus luteum; that the alternating predominance of first one and then the other of these hormones is responsible for the external manifestations of the cyclic rhythm which is so characteristic of female mammals; and that abnormally large and long-

lived corpora lutea are, by means of their hormone, responsible for the changes in the womb, the breasts, and elsewhere which accompany pregnancy. The administration of pituitary material to immature animals leads to a precocious enlargement of the follicles, which flood the body with their hormone and then, either by bursting normally or by atresia, are transformed into corpora lutea.

Zondek and Aschheim further discovered that, in the human race at least, during pregnancy the whole body is flooded with a substance which has this same effect upon the immature ovary. It is present in the blood; it is present in the placenta, the tissue which unites the maternal to the foetal organism; and it is excreted in large amounts in the urine, which can thus be used as an accurate and early test for the presence of pregnancy, often a matter of considerable importance in gynaecology. Since this substance had properties so similar to that present in the pituitary material with which they had previously worked, it did not occur to them, nor to most of their followers, to doubt that it was in fact produced by the pituitary; which was thus supposed to be exceptionally active, in this respect at least, during pregnancy in the human species.

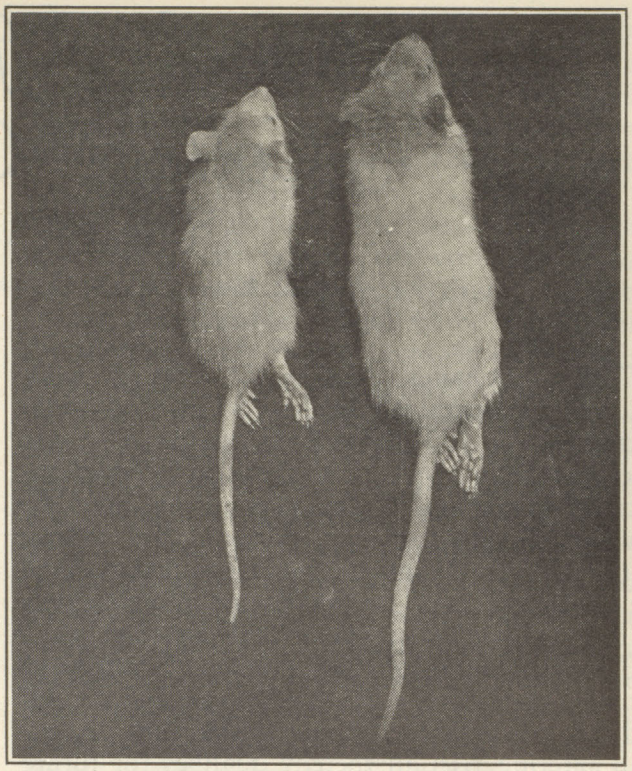
Dr. J. B. Collip and his collaborators in the Department of Biochemistry at McGill took up the study of placental extracts in 1929. At first they dealt with a hormone (emmenin) closely related to the hormone of the ovarian follicles, but later turned their attention to the substance discussed above. They purified it considerably, studied its power of stimulating the sex-glands in male and female animals, and, with the co-operation of Dr. A. D. Campbell, introduced it in the treatment of certain disorders of menstruation, especially excessive haemorrhage. From the first it seemed to them not to be quite identical with the ovary-stimulating factor present in the anterior pituitary gland itself, and they therefore always referred to it as "anterior-pituitary-like" or, for short, "A.P.L." This question of the identity or difference of the two substances has proved hard to settle. It seemed that definite information might be obtained if "A.P.L." were administered to rats whose pituitaries had been removed; and in the past year or so a number of workers have investigated this possibility, unfortunately with rather confusing results. There were those who, not looking very closely, concluded that it had the same action in the hypophysectomized rat as in the normal rat, and might therefore be identical with the pituitary ovary-stimulating hormone; there were those who thought that it had no action at all in the absence of the pituitary, and therefore probably acted on this gland first and only indirectly on the ovary. A year ago, however, a newcomer to the McGill group, Dr. Hans Selye, developed such astonishing skill in this delicate operation (as well as in the interpretation of the results) that he was able to make available a large group of hypophysectomized rats of different ages, and the problem was finally settled. "A.P.L." does act on the ovaries of the hypophysectomized rat, but in an unusual way; corpus luteum cells are formed, not as usual from the nearest neighbours of the egg-cells, but from the outermost layers (the theca) of the follicles; this gives rise to corpora lutea of a peculiar type, rarely encountered in natural conditions. If then "A.P.L." in the *normal* rat has quite different effects (enlargement of follicles, formation of true corpora lutea), it follows that the normal rat's own pituitary is contributing something to the reaction, some complementary substance which modifies the action of "A.P.L." on the ovary and permits it to evoke the picture observed and described by Aschheim and Zondek. In this way it was possible to show that the pituitary gland is active long before the ovary normally develops under its influence at puberty, though it appears to be inactive in the first few days of life.

Success in this field suggested an assault on a larger question. It had often been asked, has the pituitary one hormone for growth, one to stimulate the thyroid, one for the adrenal cortex, one for the sex-glands, and so on, or are there specific reactions by different tissues to one single hormone? The question is not only biologically interesting, but of considerable medical importance. For if the pituitary forms but one hormone, then the only abnormal conditions that can arise are that it should form too much, or too little. But if it has many different activities, producing different hormones, then all kinds of disturbances are possible: excess of one and deficiency of another, in various combinations; and treating a case deficient in only one out of several factors with a crude extract containing them all is like trying to drive a locomotive by pulling all the levers at once. The problem, then, was to separate these hormones from one another by chemical means, and as far as possible also to get rid of inert impurities. The difficulties of such a task should not be underestimated. Looking for a needle in a haystack is, in comparison, easy (magnetic or gravitational methods for separating needles

from hay would not be hard to devise!); a better analogy is searching a junk-pile for a few left-handed screws whose size and shape are unknown. The fact that these hormones do not resist powerful reagents, and are all very similar in chemical properties, does not lighten the task. It is necessary to take advantage of slight differences in solubility and similar properties, and above all it is necessary to have efficient means of testing the various fractions obtained.

It was here that the McGill group believed that they had an advantage. With their ample supply of hypophysectomized animals (some two thousand have been used in the last twelve months), they could readily test their extracts for power to restore the damage done by the operation to the thyroid, or to the adrenal cortex, or to the sex-glands, and so on. They succeeded first in obtaining a fraction which would cause the hypophysectomized animals to resume growth, but which did not restore the thyroids or other glands. Later, they produced an extract (not yet quite so pure) which would restore the thyroids of these animals to normal, with consequent restoration of the normal rate of metabolism, and in large doses would produce thyroid over-activity (exophthalmic goitre), especially in the susceptible guinea-pig; and very recently, a fraction has been obtained which restores to normal the degenerate adrenal cortex, but is devoid of other effects (Dr. Evelyn Anderson has been particularly associated with this phase of the work). The ovary-stimulating fraction, and the "complementary" effect discussed in connection with "A.P.L.," have not yet received such intensive study. In the meantime, however, work elsewhere had indicated that the pituitary had a direct effect, almost certainly by means of a specific hormone, in causing the secretion of milk from the mammary glands (though the *growth* of these organs is controlled by the hormones of the ovary). The real importance of this factor was strikingly shown by the discovery at McGill that removal of the pituitary from rats suckling their young led promptly to a cessation of the flow of milk.

The first part of our original problem is thus partly answered. Some at least of the hormone-producing glands are controlled by the anterior pituitary; which acts, as the McGill group have shown, not by a single hormone—an elixir of life!—but by producing, no doubt normally in controlled balance, at least five different hormones, some of which have been purified to a considerable degree. The second part of our original question, the interaction between glands, is too difficult for discussion here. Suffice it to say that the relation between the pituitary and its dependents is reciprocal; that excess or deficiency of the hormones produced by the thyroid or the ovary leads to changes in the pituitary itself, changes which naturally, in their turn, affect the other dependents of the "master gland." In this way our knowledge of the integration, the unity of the body is enlarged.



AN EFFECT OF HORMONE TREATMENT

The two rats here shown are of the same litter. The pituitary gland of each was removed at the same time. The larger one has developed following treatment with growth hormone; the other, untreated, has not grown since the operation.

PREVENTIVE MEDICINE

That the public does not make full use in medical matters of the knowledge at its disposal, was the opinion expressed by Dr. A. Grant Fleming, Director of the University's Department of Public Health and Preventive Medicine, in an address to the Lions Club of Montreal in June. Though infantile mortality is rapidly decreasing in Montreal, Dr. Fleming stated, the rate is still too high, and similarly, in adult diseases, man is still dying in too great numbers from afflictions that are preventible. Tuberculosis, Dr. Fleming believed, is rapidly disappearing and will in time be almost unknown. Child welfare work and public education have been important factors in bringing this eradication about.

National Affairs and the College Graduate*

By GORDON McL. PITTS, M.Sc.

(President, Montreal Branch, The Graduates' Society of McGill University)

THE Graduates' Society of McGill University, organized as the McGill University Society about 1855, was founded in 1876, and incorporated in 1880. The general objects of the Society, as set forth in its constitution, are "To advance the interests and promote the welfare of the University and its graduates, and to bind the graduates and non-graduates more closely to their Alma Mater and to one another."

The relationship of the Graduates' Society and the student body is increasingly close and cordial and they co-operate in every possible way. Every man entering McGill thereby qualifies for future membership in the Graduates' Society. It is an objective of the Society to promote the interests and opportunities of the students, educationally and otherwise, taking care in no way to interfere with true student autonomy, though the advice and experience of the Society are at the students' disposal, should they be required.

Whereas the academic training of the student is exclusively under the jurisdiction of the Corporation of the University, the Graduates' Society interests itself and makes every possible constructive contribution to other important phases of the student's university life. Finally, on his graduation, it makes a well-organized effort to place him in a position suited to his qualifications and advancement.

McGill University is in a true sense the national university of Canada. It was founded on the inspiration and contributions of a private citizen, James McGill, and has been maintained and developed through the beneficence of private citizens, notably Sir William Macdonald. It exists by virtue of a Royal Charter, is non-sectarian, has no Provincial or Dominion affiliations, and shines a bright star in the educational firmament through the capacity and achievements of its leaders and the men it has produced.

Its hard-won independence has assured the directness and sincerity of its policy. Its aim is not numbers, but quality. Many of its departments have reached the point where selection has to be made from eligible candidates for admission. It is the function and ideal of McGill University to make men. Some of these have been, some are, and some will be, great. All are trained to be loyal and true citizens. This is McGill's contribution to the nation. To graduate and student alike, she points to the illustrious path of those who have gone before, and demands that by truth, sincerity, knowledge, inspiration, initiative, and industry, her sons shall take that place among their fellows for which she has so liberally prepared them.

We recall with pride the names of some of the famous men who have imparted to this great institution the ideals and qualities which have achieved for it so honoured a place among its sister institutions:

Sir William Dawson
Sir William Peterson
Sir Arthur Currie
Dr. Frank D. Adams, Sci. '78
Dr. H. S. Birkett, Med. '86
Rt. Hon. Charles J. Doherty, Law '76
Rt. Hon. Sir George E. Foster, Law '81
Rt. Hon. Sir Wilfrid Laurier, Law '64
Dr. Charles F. Martin, Med. '92
Sir Andrew Macphail, Med. '91
Dr. R. Tait McKenzie, Med. '92
Bishop J. H. Newnham, Arts '78
Sir William Osler, Med. '72
Sir Thomas G. Roddick, Med. '68
Lord Rutherford, Sci. '00
Hon. A. C. Rutherford, Law '81
Dr. F. A. C. Scrimger, V.C., Med. '05
Hon. Sir M. M. Tait, Law '62
Dr. H. M. Tory, Arts '90

The present situation in our national affairs provides not only an opportunity, but a challenge and a responsibility to every McGill man. Individually and collectively, we must make our contribution to the return of confidence and prosperity. At no time in her history has Canada been faced with so many and varied problems pressing for solution. Every trained and experienced man owes it to the community to give these his thoughtful and earnest consideration, in order that a sound public sentiment may be

developed and crystallized into wise legislation calculated expeditiously to disrupt the vicious circle within which we seem increasingly involved.

Let us free ourselves from party policy, petty politics, and sectionalism and base our deductions on sound, constructive, and honest business principles. There are wise, experienced, and forceful men in our Parliament; but their power of direct action is hopelessly impeded by the undertow of the petty politician. The administration of our national business is too tedious and expensive a process.

The concentration of authority in the hands of honest, competent, independent men has done great things for other countries of the world and may yet be Canada's salvation. The remedies must be immediate and drastic. The theory that Canada must sit with folded hands until the other nations make up their minds to have prosperity will be our ruination. Our salvation lies in concise, concerted, and constructive effort. Some of our most pressing national problems, to which every citizen must give consideration, may be briefly mentioned.

Our railway problem has been competently analyzed. The truly salient feature of the bill passed by the Canadian Parliament is the effective removal of the railroads from political influence. It is definitely indicated by the Commission's report that the close co-operation of these utilities will save the country millions of dollars in the next five years. Such a practical demonstration of the economies to be realized and the quality of service to be attained through an efficiently organized and correlated transportation system will create a public sentiment and confidence which will, in the future, warrant a further concentration in the administration and operation of the combined transportation facilities of this country. Economic pressure and the process of normal development will increasingly and irresistibly tend to draw these facilities into closer and more effective combination, despite any arbitrary laws or political restrictions. The science of rail transportation is continually developing and, with new methods and materials, we shall in the near future see as great changes in this field as we have recently witnessed in highway transportation. Light, fast, and frequent passenger units, combining the safety of the rails with low fares, will draw patrons from the expense, tedium, and danger of motor traffic on narrow and congested highways.

It is evident that the citizens of Canada will very shortly be required to give serious consideration to the question of the development of the St. Lawrence Waterway. This is a national luxury of undetermined cost, doubtful value, and far beyond our means at present. The United States, having twelve times the population, will derive approximately twelve times the benefit. As presently contemplated, and including the cost of the Welland Canal, Canada will contribute nearly one-half of the cost. Is Canada warranted in still further mortgaging the future for the questionable benefits to be derived from this undertaking? In any event, in order that the costs may be equitably apportioned, and that Canadians may not directly subsidize our American neighbours, this inland waterway should be operated under a system of tolls, as in the case of the other great canals of the world.

The Canadian Radio Commission was recently formed. As a regulatory body it may serve a useful purpose. As another Government business effort for the exclusive owning and operating of stations, dispensing of programmes, and employing of talent, its formation constitutes a very questionable policy. Our past experience would indicate that this Commission will accelerate its activities and increase its scope, until the users of radio in Canada will be required to pay such a high yearly license fee as will preclude those who now get the most pleasure and edification from this form of entertainment from owning a radio. The purchase of machines will decline and a higher license fee will be necessary on the reduced number of instruments to meet the Commission's expenses, and a smaller audience will reduce the advertising value. The public would prefer to pay for their programmes by listening to one minute of advertising in each fifteen-minute period than to be assessed a yearly license fee of possibly five or six dollars. The immediate developments in the science of radio and television will have a tremendous effect on this whole industry and its control.

In the national emergency of 1914, the Dominion Government enlisted men whom it fed, clothed, housed, and provided with medical care, amusement, and a small nominal wage. In addition, it provided vast quantities of war materials, together with heavy transportation costs. The present unemployment situation is also a national emergency and should be treated as such. A National Employment Corps should be formed, under the department of the Federal Government best suited for its direction, the men being provided for as above, given a nominal wage, and placed on development work of a national character. Under such a scheme, technical and semi-technical skilled workers and ordinary labourers would be provided for and

their morale, self-esteem, national loyalty, and pride would be maintained. Through their work, at a low wage, they would be making a definite contribution to the welfare of the community and at the same time would be maintaining themselves and their self-respect. Through the agency of such a corps, the Montreal Trans-island Boulevard could be carried out, an enterprise which neither the City nor the Province will be in a financial position to undertake for years to come. Such a development would create new values, would provide the opportunity for, and would attract the investment of, private capital for new buildings and construction work in the new areas made accessible thereby. There are many other possibilities of development under such a scheme.

For the return of prosperity we must create such new values. For years past Montreal has been considering an underground rapid transit system. It has been proposed to construct a four-tube subway under Park Avenue at a cost of many millions of dollars. One-eighth of a mile west of Park Avenue there exists an ideal rapid transit system in the twin tubes of the Canadian National Railway tunnel under Mount Royal. This could easily be adapted to the use and benefit of the citizens of Montreal by turning the street cars into this tunnel at St. Antoine Street, to provide an all-express service through the Mountain, with one stop for the elevators to the high-level circulation at Maplewood Avenue. North of the mountain, the service would turn east and west, forming a double loop. Thus a very large area of the Island of Montreal would be brought within a few minutes of the centre of the City. Land values would rise, construction would be stimulated, and congestion would be relieved on such thoroughfares as St. Catherine Street and Park Avenue.

Thus it is that we can stimulate the return of prosperity. It is in the promotion and execution of practical and constructive ideas that the trained, experienced college graduate can make a contribution to the well-being of his community. Let us combine our talents and abilities with the talents and abilities of our fellow-citizens, and, with mutual confidence and appreciation, let us actively co-operate and work for the common good.

*From a radio speech, delivered under the auspices of the Graduates' Society over Radio Station CKAC, Montreal, March 31, 1933

The Largest Non-Ferrous Metallurgical Plant in the World

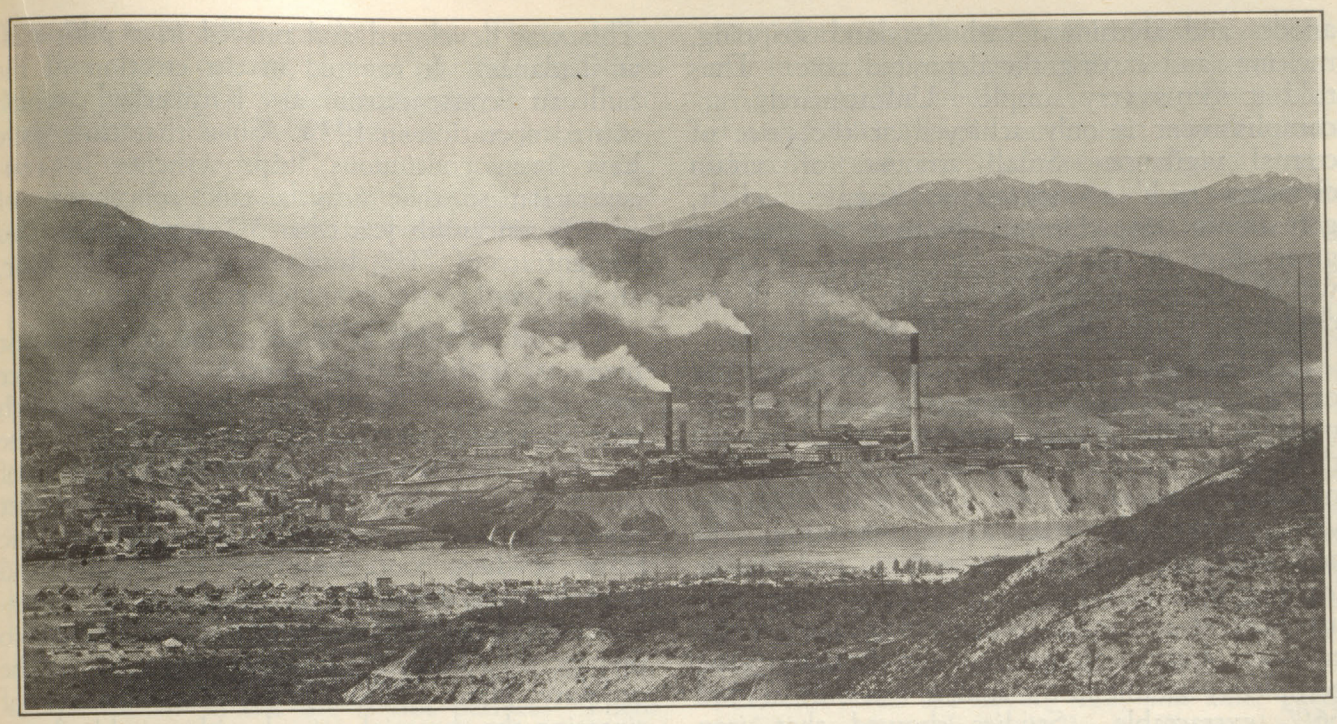
NOTES ON THE REDUCTION WORKS OF THE CONSOLIDATED MINING AND SMELTING COMPANY OF CANADA, AT TRAIL, B.C.

By G. E. MURRAY, Sci. '11

IT is somewhat of a surprise to one of the technical staff of the Consolidated Mining & Smelting Company, on visiting Eastern Canada after an absence of a decade or so, to find an almost universal demand to know what the action of "Smelters" stock is likely to be. Accompanying this desire are usually rather vague ideas about the activities of the organization. Without being too technical then, this article will endeavour to outline the factors which have made the reduction works at Trail not only the largest non-ferrous metallurgical plant in the world, but also one that is unique in the diversity and correlation of its operations.

The City of Trail with a population of around 9,000 is situated on the banks of the Columbia River about 12 miles north of the International boundary. The town takes its name from Trail Creek, which runs through it. This was so named because the Old Dewdney Trail connecting the Coast with the Interior crossed the Columbia near here and followed the Creek up to Rossland, 6 miles distant. The works are situated on a bench above the city, in a company town called Tadanac, which is also the name of the Company's brand.

Gold-copper ore having been discovered in Rossland about 1890, a wagon road was built from Rossland to the mouth of Trail Creek and the ore was then shipped down the swift Columbia on its way to be smelted at Tacoma, Washington. As knowledge of the magnitude of the ore bodies



THE LARGEST NON-FERROUS METALLURGICAL PLANT IN THE WORLD C.P.R. Photo

General view, looking west, of the reduction plant of the Consolidated Mining and Smelting Company of Canada, Limited, at Trail, B.C.

increased, it became evident that the erection of a local smelter was justified, and in 1896 a small copper smelter, built by F. Augustus Heinze, of Butte notoriety, was "blown in." Many wild tales are current amongst old-timers of the doings of Heinze and his satellites, and indeed in those days both the East and West Kootenay districts well earned the title of the "wild and wooly West."

In 1897 the C.P.R., anxious to obtain Heinze's railway rights, bought him out and thus became the owner of the Trail Smelter. In 1901 a lead plant was added to handle the rich ores from the Slocan district about 40 miles distant, and in 1906 the present Company was formed, still controlled by the C.P.R., to consolidate the interests of the Rossland mines with the smelting industry. In 1910 the Sullivan mine in East Kootenay was acquired; and this fact is the foundation of all the development since.

The Sullivan ore body is one of the great deposits of the world. It is essentially a replacement deposit in beds of argillaceous quartzites and in places has a thickness of 240 ft. at right angles to the dip. The ore is a very fine grained mixture of galena, zinc blende, pyrite, and pyrrhotite. When the mine was acquired there were no known means of effecting a suitable separation of the constituent minerals. Not only was the zinc not recovered, but there was a penalty charged by the lead smelter for its presence. It thus became doubly necessary to solve the problem of efficiently winning the different metals from the ore; and the story of this task has been the history of the Consolidated for the past twenty years. What has been accomplished has practically all been done through the pioneer work of the Company's own staff, starting with experiments on the then known means of concentration. As it became evident that these would not succeed, attention was turned towards concentration by pyrometallurgy and hydrometallurgy.

In 1914 when the War broke out, experiments were in progress on the making of electrolytic zinc, and these continued, a few car loads of zinc being made in the experimental plant. Later, in 1915, a plant to produce 50 tons of electrolytic zinc daily was erected, and operations were started early in 1916, the plant capacity having been increased in the meantime. From that date there have been additional enlargements, until at present the zinc plant capacity is approximately 400 tons a day. This development was of great importance, as previously the mine had been able to ship only selected ore high enough in lead and low enough in zinc to be smelted for lead.

In brief, the production of electrolytic zinc from sulphide ores consists of roasting to the oxide or sulphate leaching with sulphuric acid, purifying and clarifying the solution of zinc sulphate formed, electrolyzing it in cells with lead

anodes and aluminum cathodes, and stripping, melting, and casting the deposited zinc. Thus told it seems very simple. Unfortunately, accomplishment is only achieved at the price of eternal vigilance. Small amounts of certain elements such as antimony, arsenic, cobalt, germanium, tin, chlorine, fluorine, etc., have a great effect on the electrolytic action. Careful watch has then to be kept on the quality of the electrolyte if the operation is to be successful.

The burning of the sulphur due to the roasting of the sulphides in the feed was originally done in multiple hearth Wedge roasters, provided with thick brick walls to conserve the heat. It immediately became evident that heat dispersion was required rather than heat conservation. An acid plant was also built to provide acid for the leaching operation. Shortly, however, there was an excess of acid made from the sulphating in the roasters. Instead of the zinc after roasting being completely soluble in the acid, it was only around 66% extractable. Studies showed that iron combined with zinc as ZnO, Fe_2O_3 or zinc ferrite, which was insoluble in cold dilute sulphuric acid. Further study showed that all the iron present did not thus combine, some iron was present as the minerals pyrite and pyrrhotite, other iron was isomorphously combined with the zinc making the zinc mineral a marmatite instead of a pure blende.

All this made it evident that the roasting of the Sullivan ore to get the maximum possible extraction was not a simple problem. Continuous efforts have been made to better the work and have resulted in the development of a new roasting process, which not only increases the solubility of the zinc but also provides a high grade SO_2 gas for the efficient manufacture of sulphuric acid, which is now required for the new fertiliser industry that has been started in the past few years. In this process the finely divided concentrates are blown into a roaster after drying, much in the manner used for burning powdered coal, and by an ingenious method of temperature control greatly increased tonnages are treated with consequent cost reductions.

This roasting problem is an example of the continuous technical study that has resulted in the improvements that are being made to the electrolytic process all the time.

In the meantime efforts were continued to concentrate the ore, as this was essential if the large mixed ore body was to be successfully exploited. This work culminated in the first successful development of a method to separate mixed lead, zinc, iron sulphide ore high in iron. This was developed and proved in a pilot mill at Tadanac. It resulted in the erection of the Sullivan concentrator at Kimberley, which started operation in 1923. Since that time there have been continuous improvements in concentration so that now a zinc concentrate of 52.0% zinc with less than 3% lead, and a lead concentrate of 71% lead containing 4.0% zinc, are delivered to the reduction plants in Trail.

The lead smelter at Trail is one of the largest plants of its kind in the world. It can produce over 700 tons of lead bullion per day, although only 425 tons of this can be handled by the refinery. On account of the unique character of the charge, consisting almost entirely of fine wet material, such as flotation concentrates and zinc plant residues containing the iron, lead, and insoluble zinc from the leaching treatment described previously, it is much more difficult to prepare for smelting than that met with in the ordinary plant. This preparation consists of sintering the material mixed with suitable fluxes in order to oxidise the sulphides and to combine the fine materials in a form which will allow them to be treated in a blast furnace without an excessive amount of dust.

Sintering as practised at Trail is done on straight line Dwight and Lloyd machines. These consist of a series of movable pallets fitted with grate bars which pass over wind boxes attached to a suction fan. The fine material to be sintered falls on the moving grates, passes under an oil burner which heats the sulphides on the top of the bed to the point of ignition, and then the combustion proceeds downward through the cake as it passes over the wind boxes. The finished product, with the sulphur reduced from around 12% to 1.5% in two passes, has a structure resembling the clinker that sometimes is found on the grate of an ordinary hand-fired coal furnace. This sinter containing about 50% lead is mixed with coke and charged to the blast furnaces, where reduction of the oxidised lead products to metallic lead takes place by the action of the CO produced by burning coke. This impure lead, or bullion, contains practically all the gold and silver in the charge as well as some impurities, such as copper, arsenic, and antimony. As the bullion cools, a dross is formed, which is skimmed off and treated for its copper content. The drossed bullion is then cast into suitable shapes for electrolytic refining.

The antimony content of the bullion must be carefully controlled, as in the Betts electrolytic refining process which was first installed at Trail and is still in use, the slimes formed as the bullion

dissolves must adhere to the anode. The qualities of this slime coating depend on the impurities in the bullion, of which antimony is the most important. The electrolyte used is lead fluo-silicate with free H_2SiF_6; and the cathode used, on which the refined lead is deposited, is a sheet of lead ingeniously made by pouring molten lead over a cast iron plate the requisite size. The lead solidifies and the sheet is trimmed quickly with a knife and is ready for placing in the tanks.

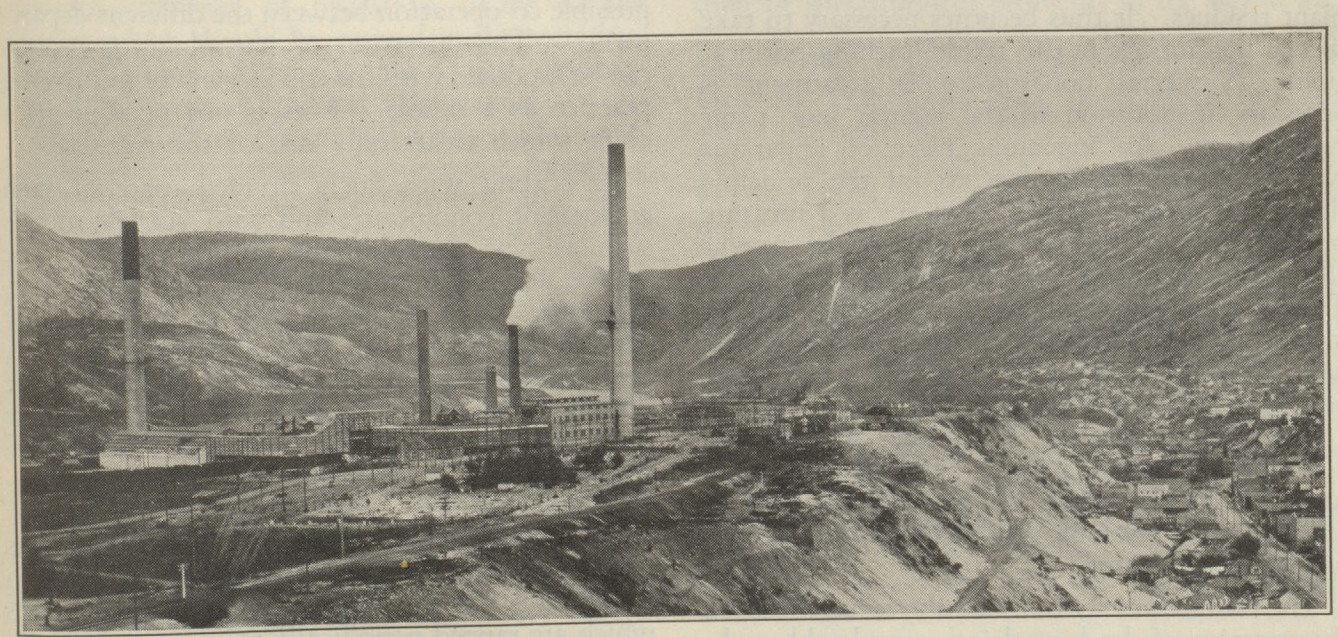
The slimes which contain the precious metals are treated by fire refining methods, which produce doré metal, an alloy of gold and silver, which are parted by dissolving with sulphuric acid, the silver going into solution and the gold remaining undissolved. The silver is then precipitated as a white powder by means of copper, bluestone being a bi-product of this operation. Later bricks of gold and silver are cast for shipment.

As in most practical processes, the separation of the metals in the ore is not perfect. There is some lead in the zinc concentrate and some zinc in the lead concentrate. It has been noted, too, that some of the zinc is combined with iron in the roasting processes. In fact, the residues from the zinc leaching carry about 8.0% lead, 21% zinc, and 6 oz. of silver per ton. This material must then be treated.

In lead smelting, as it is the slag forming materials other than zinc which are most easily removed by concentration, there is a tendency for lead slags to become higher in zinc as the grade of the lead concentrate rises. It was early recognized that efforts should be made to carry as high a zinc in the lead slag as possible, in order to get a product which it would pay to treat. The making of a slag with a high zinc content requires careful adjustment of the lead furnace charge, but a technique has been developed which permits the making of slags containing around 18 per cent.

With large quantities of bi-product material of high metal content available, a great deal of experimentation was undertaken to determine the best method for extraction. A successful brine leaching process for recovering the lead and most of the silver in the residues by electrolysis was developed amongst others. On account of the situation at Trail, where the company has large resources of cheap power available on the Kootenay and Pend d'Oreille rivers, every effort was made to use electrical methods. A successful electrothermic reduction process was developed which could treat both the slag and the residues. This recovered the silver, lead, and zinc, partly as fume and partly as bullion. From the slag made, which was about 60% iron, a low sulphur iron was produced, which could be readily made into steel.

Some early experiments had indicated the feasibility of treating the molten slag with powdered coal. Owing to the erection of a coal-fired copper reverberatory furnace in 1927, an adequate supply of powdered coal became available at the smelter for further work, and experiments quickly indicated that it would be cheaper to recover the metals by this means.



ANOTHER VIEW OF THE SMELTERS PLANT AT TRAIL, B.C. C.P.R. Photo

In addition to the distinction of being the largest non-ferrous metallurgical plant in the world, the Trail works are unique in the diversity of their operations.

The slag fuming plant was consequently erected and started to operate in 1930. The slag is treated in a water-jacketed furnace, 24 ft. long x 10 ft. wide, into which it is poured molten in batches of about 60 tons. Through this molten bath, powdered coal, with air insufficient for complete combustion, is blown. The result is the reduction of the lead and zinc oxides in the slag to the metallic state, in which form the metals fume off. The addition of air then allows the metals to burn again giving a fume containing lead and zinc oxide. The net thermal result of this operation is equivalent to the complete combustion of the coal as the energy required to reduce the metals is recovered when they reburn.

The temperature of the fume-laden gases leaving the furnace is about 2400° F. and cooling must take place before the oxides can be caught in woolen bags. The temperature for this operation must not exceed 200° F. A waste heat boiler and economiser is used for this purpose, and the steam thus generated is used in various processes around the works, particularly in the fertilizer department.

The oxides, after recovery in the baghouse, are shipped to the zinc plant, where they are leached with sulphuric acid. In this connection a great deal of careful research was necessary in order to make the solution suitable for electrolysis, as there is a concentration of volatile impurities in the smelter slag due to the closed circuit that now exists between the lead and zinc departments. The volatile impurities will fume off with the lead and zinc and be returned again in the zinc plant residues. It thus becomes necessary to take special precautions in this oxide leaching purification. A special hot-iron-copper treatment is necessary in addition to the regular zinc plant purification. An ingenious piece of apparatus was developed which depends on the principle that the hydrogen cathode efficiency is a measure of the purity of the solution and of the current efficiency that can be expected during electrolysis. This allows determination to be made almost instantly whereas ordinary chemical means would have required considerable time and it is a great help in the plant operations.

After the electrolyte is purified, it joins the flow in the main zinc plant. The lead oxide, now sulphated by the action of the sulphuric acid, is returned as an insoluble residue to the lead smelter where it is retreated.

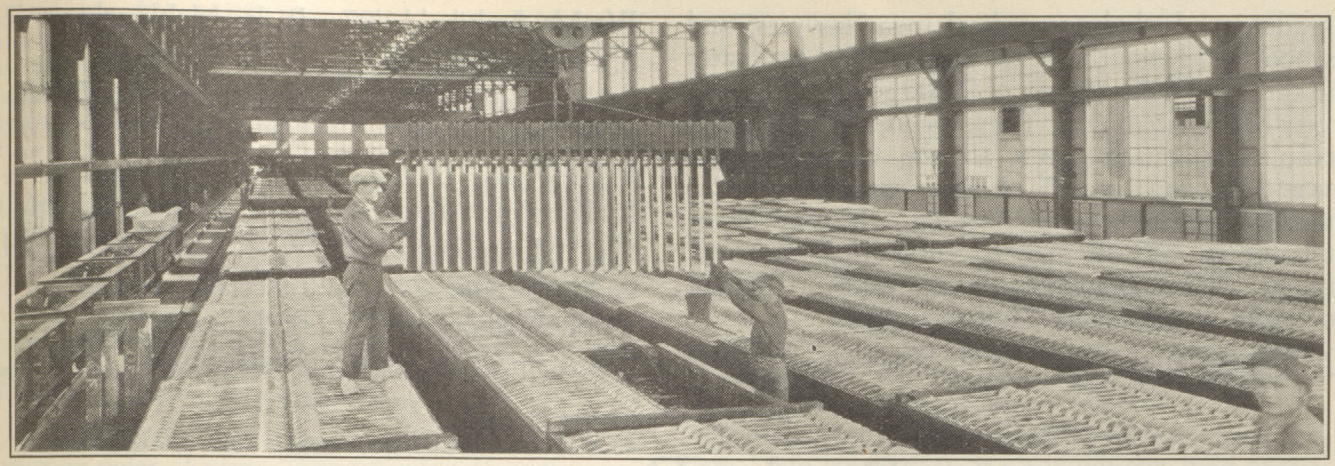
The fuming process outlined above has modified the practice of lead smelting considerably. In most smelters the greatest source of metal loss is in the slag. To reduce this loss expensive fluxes and relatively large amounts of coke have to be used. At Trail, as the lead in the slag is recovered in the fuming furnace, it is possible to get along with less fuel and flux, and reduction is not of prime importance. Greater tonnages are attainable and the operation of the furnaces is smoother. This in turn allows operating labour to be reduced. A lead blast furnace running well does not require much attention. It is a moody creature, however, and is always referred to by the furnacemen as "She;" and when "She" gets sick on a hot summer's day a lot of men can sometimes be used up in getting her well. This now happens so infrequently that it is possible to run with a minimum number of workers.

The slag which is rejected from the fuming furnace carries at present practically no lead and about 3% zinc. The amount of zinc left in depends on the relative prices of coal and zinc. It contains about 37% iron, and when conditions warrant it can be used as the feed for an electric iron smelting process.

This slag process has completed the cycle of treatment of the lead and zinc in the Sullivan ore. The recovery of its sulphur and iron contents is another story, the beginning of which has already been made in the start of the new fertiliser industry, which has a great future, though space will not permit dealing with it here. It is this combination of lead and zinc metallurgy that makes the Consolidated's operations unique at the present time. From the mining of the ore to the selling of the metal, all the operations are under one direction. In this way there is the closest possible co-operation between the different departments. The operation of one plant or process can be modified with the end in view of improving practice as a whole. This is not possible in a plant which treats only one of the metals.

In dealing with finely divided material such as flotation concentrates and with volatile metals such as zinc, lead, arsenic, antimony, etc., the smoke and dust problem is an important one. Not only is the smoke or dust of high metallic content but in the case of these metals it is toxic, and thus successful operation depends on the careful handling of fume-laden gases. These must be cleaned and the recovered products retreated. This is done in Cottrell plants, baghouses or cyclones, depending on the conditions. The Cottrell system consists of passing the gas stream through a strong electrostatic field which precipitates the solid particles on plates or pipes which are rapped periodically to remove the dust.

It is seldom realised by the layman that in a reduction works such as at Tadanac the most



SCENE IN THE LEAD REFINERY AT TRAIL, B.C. C.P.R. Photo

Workmen are here shown placing anodes in one of the tanks. The photograph conveys a striking impression of the vast scale on which the operations of the company are conducted.

important material handled is air. For instance, at present approximately 1,000 tons of concentrates per day are handled in the plant. To reduce these to metal requires the handling of more than 1,000,000 cubic feet of air a minute. This amounts to more than 50,000 tons per day. It is evident then how important it is to handle these large volumes properly. One of the great advances that has been made in operating metallurgy in the past 25 years has been the realisation that problems relating to gas handling and ventilation cannot be done by rule of thumb. The consequence has been the practical elimination of metallic poisoning in the plant and a generally increased efficiency of operation. One of the subjects which should be stressed in the metallurgical and mining courses is that of gas handling. It is of the greatest practical importance.

The Tadanac works are fitted with very up to date and efficient mechanical equipment, including foundry, machine, boiler, plumber, and carpenter shops, and the latest addition, a shop for repairing and reconditioning the fleet of airplanes used in the company's exploration service. As much equipment as possible is manufactured at Trail, and all erection work is carried out by local crews, supervised by the Construction Department.

A well equipped research laboratory and highly trained technical staff are at the service of the operators. Here many a difficult operating problem has been solved, particularly in connection with the development of the electrolytic zinc process. A research committee meets weekly to discuss problems that have been submitted, as well as to consider general questions of technical interest. These are passed on and referred to a Senior Staff meeting, which also confers weekly. In this way the Superintendents in charge of each department are kept advised of all projects under consideration and are able to place their specialised knowledge at the disposal of those particularly interested in any problem. The staff is particularly proud of the spirit of co-operation and team work that has been built up in this connection.

This somewhat discursive article on some of the work done at Trail may give an idea of the importance of this Canadian enterprise. A group of Canadian university graduates, led by S. G. Blaylock, Science '99, has solved one of the most difficult metallurgical problems in the world and has developed an industry which is second to none. The plant produces refined lead, zinc, bismuth, cadmium, gold, and silver, and at times platinum when the copper plant, which is now closed, is running. In addition it manufactures 100% sulphuric acid from the sulphurous gases. This is sold as well as used in the manufacture of all grades of ammonia and phosphate fertilisers. The Company's products are shipped all over the world, and the Tadanac Brand takes the highest place. With the tremendous ore body of the Sullivan behind it and a highly trained technical personnel it will undoubtedly continue to be the most important industry in the interior of British Columbia for generations.

Those who are accustomed to live in large Eastern cities such as Montreal, sometimes find it difficult to understand how one can be contented with things in general in what they refer to as a pioneer Western town. There can be few communities anywhere where there is as much congenial company for the average university

graduate. Including medical men, lawyers, and school teachers, there are nearly 200 graduates in the Trail Community of 9,000 souls. This is a very high percentage. There are in the Company's employ graduates from all the Canadian universities, and many of the large American institutions are also represented. It may be of interest to McGill men to know that there are many McGill graduates on the Staff. The list of those at present at Trail includes:

A. L. McCallum, '96
A. G. Dickinson, '23
W. M. Archibald, '97
S. G. Blaylock, '99
A. B. Ritchie, '06
G. E. Murray, '11
F. S. Willis, '11
R. K. Blois, '12
S. C. Montgomery, '15
C. H. Wright, '21
T. H. Weldon, '22
R. G. Anderson, '23
R. R. McNaughton, '23
D. S. Wetmore, '23
A. W. Moore, '25
J. F. Owen, '27
J. H. Hargrave, '28
B. P. Sutherland, '28
W. J. Rosenbloom, '29
F. E. Weldon, '31
R. Manson, '31
Donald Ross, '31

Book Reviews

LORD RIDDELL'S WAR DIARY: Ivor Nicholson and Watson, Limited: London, 1933: 387 pages: 21 shillings.

NOTABLE in many ways, this day-to-day war diary is outstanding for the intimate portrait it presents of the Right Honourable David Lloyd George. Lord Riddell was the liaison officer between the British Government and the press and was in consequence in close touch with all the important political figures of the day, but he was also Mr. Lloyd George's confidant and personal friend and it is this association that gives to his book its peculiar value.

In these days, when Mr. Lloyd George's sun is in eclipse, people are prone to forget the services he rendered in the period of the Great War. On November 10, 1918, Mr. Bonar Law is shown by this book to have said to him "If you would go down in history as the greatest of all Englishmen, retire into private life now." Perhaps it is unfortunate that the advice was not heeded, but the fact that a colleague gave it strikingly reveals the position that Lloyd George held in world affairs at the time.

And that the position was deserved this book supplies abundant evidence. Many have disagreed with Lloyd George's policies and harsh accusations have been levelled against him, not without substantial justification; no one has denied the courage of his war-time leadership, or that, according to his lights, he served the Empire faithfully and well. Over and over, as Lord Riddell points out, he inspired the cabinet with his own optimism and dispelled through the sheer force of his abundant vitality the clouds of gloom or discouragement that events in the active theatres of war had engendered.

In regard to his relations with Mr. Asquith and the Commanders-in-chief in the field, Sir John French and Sir Douglas Haig, the comments Lord Riddell records are illuminating. Time and again Mr. Lloyd George repeats, almost in despair "Asquith will not face unpleasant facts," adding on one occasion, "He is essentially a House of Commons man. When he has vanquished his parliamentary adversary he feels that the war is really making satisfactory progress." It was this characteristic, which he believed Mr. Asquith to possess, and which became crystallized in the suicidal phrase, "Wait and see," that urged Lloyd George to take the steps leading eventually to his own prime ministership. Similarly his attitude towards the Commanders-in-Chief was governed by an opinion which he never altered: "We really have not much brains at the head of our Army."

Of his own philosophy of life, Mr. Lloyd George remarked on one occasion "I have none beyond 'Follow your nose.' That is a sage maxim." It is by selected quotations such as this and by shrewd comment of his own that Lord Riddell succeeds in portraying vividly all the notable men who fill his pages. What could reveal the character of Kitchener more clearly than the incident at a meeting of the War Council when the results of a by-election were received? Kitchener stared at the paper uncomprehendingly and could not share in the excitement it aroused. Winning the war was his job, it absorbed him to the exclusion of all else, and the result of an election which might indicate whether the government in which he served might expect to stand or fall was to him of no imaginable consequence. And what could reveal the insight of Clemenceau more than his remark when he was shown the armistice terms prepared for Austria "There is only one thing omitted. You have not demanded the Emperor's breeches?"

It is impossible in a review of this nature to deal with the incidents of a book which is itself in the nature of a review of four of the most eventful years in modern history, but one can record a point which, perhaps, constitutes a tribute to the diarist as well as to those others whose actions he records. The point is this: The book, despite the detailing of much bitter political controversy, the revelation of much apparent self-seeking, the unconcealed exhibition of much human weakness in high places, leaves one with complete conviction regarding the basic loyalty of the men who governed England throughout the war. They fought, they disagreed, they intrigued, but the reasons for their doing so were, almost without exception, to be found in their desire successfully to prosecute the war. A dictatorship might have done better; it is doubtful if any other government with so many talented, opinionated, and powerful component members could have done as well.—R.C.F.

A HISTORY OF DELOS. By W. A. Laidlaw, M.A. (T.C.D.), *Lecturer in Latin in the University of St. Andrews*. Basil Blackwell, Oxford, 1933. 18s. 308 pp.

The object of this work is "to select from the literary and inscriptional evidence in such a manner as to present

a continuous history of Delos insofar as it can be ascertained." This is no simple task, for the unity of Delian history never lies in an internally directed course of events, but in reflecting the balance of forces in the eastern Mediterranean. Political vicissitudes deprive it of any constancy of population, racial constitution, or civic character. The history is, therefore, very literally, of the island itself (a surprisingly small rocky ridge for its historical rôle), and certain of its stable cultural features. These are chiefly the religious tradition, represented above all by the activities of Apollo's temple, and the economic pursuits of a great inland trading centre, which lasted only as long as Corinth was held back by a rival league or Roman jealousy, and the ports of northern Greece were undeveloped.

Accordingly the various portions of this book present a shifting point of view. There is a good summary, at the outset, of legend and tradition insofar as they reveal the religious function of the island and its character as a religious centre. The best chapters are those utilizing the discoveries made on Delos itself—in fact the book owes its origin to the author's interest developed in such an investigation. One of these is descriptive of monuments and houses; and the other, on Italians and other Nationals at Delos, infers from the evidence the presence side by side of self-enclosed groups and a medley of cults. Similarly, the central part of the book is at its best in the hints it gives, through reference to inscriptions and dedications, of the ambitions and interests of outside powers and of the business administration of the temple. The historical chapters on Delian events during Athenian control and the succeeding freedom are fragmentary, not only from the nature of the evidence, but because the writer finds himself compelled to recount outside happenings without which the Delian story would be unintelligible. Certainly such important questions as the volume and distribution of the corn trade, the slave trade, wages, prices, and rents belong properly to Delian history and deserve more than the occasional mention and the short appendix which they get. For the significance of Delian history lies not merely in its relation to, but also in its representative revelation of, the surrounding world conditions. Thus its limited execution causes the book to fall between two valuable extremes: it is not full enough to be a source book, nor inspired enough to be history. Its value lies in a scholarly gathering of many interesting details and learned discussion of disputed points.—A. Edel, B.A. (Oxon), M.A. (McGill), Ph.D., *Instructor in Philosophy, College of the City of New York.*

DEBABELIZATION: By C. K. Ogden, M.A. Kegan Paul Co., London, 1931. 2s. 6d. 170 pp.

In this little volume Professor Ogden carries on his campaign for the adoption of Basic English as a solution of the problem of Babel. Basic English, as readers of *The McGill News* are aware, is a modified form of English, in which 850 selected words, plus certain technical or internationally recognized words, form the complete vocabulary. Rules for using these words are simplified in "an effort to give to everyone a second, or international, language, which will take as little of the learner's time as possible."

Attempts to formulate an international language are not new. Volapük, which Professor Ogden notes is now as dead as Sanskrit, claimed 1,000,000 supporters in 1889. Esperanto is more familiar at the present time and Ido, an improved Esperanto, has attracted considerable attention. But these and many others are synthetic languages; Basic English is an adaptation of an existing language and enjoys the advantage of being comprehensible from the start by millions of people.

In his advocacy of Basic, Professor Ogden writes: "To the eye and ear it will not seem in any way different from normal English, which is now the language of 500 million persons." These figures seem surprising—*Whitaker's Almanack* for 1930 states that 180 million people use English as their mother-tongue—but are explained by the inclusion of peoples under British administration, and foreigners who speak English as well as their native tongues.

In regard to Professor Ogden's second claim that Basic "will not seem in any way different from normal English " to the eye or ear, the sensitiveness of varying eyes and ears seems not to have been taken into account. Yet the claim is not without a measure of justification, for, if not forewarned, one might casually read a half column in Basic without noticing the departures from traditional forms. Great efforts are now being made to popularize Basic English, and Professor Ogden's support of the move adds to the chances of success. Those who read *Debabelization* will realize more completely than before, perhaps, the great service that widespread adoption of Basic would render to mankind. Professor Ogden's enthusiasm is shown by the quotation from Genesis with which his book is introduced: "And the Lord said, Behold the people is one, and they have all one language; and now nothing will be restrained from them, which they have imagined to do."—R.C.F.

SUMMER LIBRARY SCHOOL

The largest summer library school ever held by McGill University, that conducted in Charlottetown, Prince Edward Island, this summer, was brought to a close on July 29 when addresses were delivered by Sir Andrew Macphail and the Hon. W. J. P. Macmillan, Acting Prime Minister of the Island government. The regular course, lasting a month, was attended by a large number of students from Prince Edward Island and other parts of the Maritime Provinces, and, in addition, the series of free public lectures delivered in the evenings drew a notable attendance.

MAGAZINE SUBSCRIPTIONS

Statistics published in July reveal McGill University as one of the world's important subscribers to magazines. Some 2,000 periodicals are subscribed for by the University in the usual way, 930 are received as presentations, and 565 appear on the list as exchanges. The magazines come from all parts of the civilized world and deal with most varied subjects. Visiting librarians have rated the collection that exists as one of the best available.

SIAMESE REFERENCE BOOKS

With the compliments of the Government of His Majesty the King of Siam, two volumes were presented to McGill University in July and are now available for reference or consultation. The first, entitled "Siam—Nature and Industry," is a comprehensive encyclopaedia on the modern development of Siam; the second, "Siam—General and Medical Features," gives details of the striking medical development within the Kingdom in recent years.

Faculty of Graduate Studies and Research

(List of Students upon whom Post-Graduate Degrees were conferred in May, 1933, giving the Titles of their Theses.)

The McGill News presents below a list of the theses which were accepted last spring by the Faculty of Graduate Studies and Research in part fulfillment of the work required for the various post-graduate degrees offered by the Faculty. It is hoped that the publication of the list in this fashion will constitute a bibliographical record, and will at the same time give some idea of the extent of the research carried on at the University during the past year.

While the highly specialized scientific subjects will be of particular interest to other workers in the same field, it is of interest to note some of the more general problems which were selected for study. Many of them, one remarks with gratification, touch directly upon contemporary phases of our civilization, and not a few are consecrated to the Canadian scene. Some have contented themselves—and fittingly so, for it is in the best tradition—with the examination of obscure and minute questions, others have eschewed the proverbial counting of the number of datives in a given work for the consideration of recent and major problems.

Unemployment looms large. There is, for instance, a thesis dealing with unemployment among dock labourers in Montreal. Another discusses the problem of seasonal unemployment. Still another undertakes a study of employment and unemployment in the railway industry in Canada. Such direct contributions are practical, and useful in the extreme. But lest one get the impression that practicality is necessarily desirable in the researches of our graduates, let us observe that there are many scholars at McGill who have taken up problems and examined them for their intrinsic value, irrespective of the possibilities of their application practically at any time. That is the thorough and scholarly approach: a desire for knowledge, an insatiable curiosity, the proposing of a problem and its solution. And so it is gratifying to notice that side by side with a thesis on wine in Canada—a subject surely which will become increasingly popular across the border before the year is out—one student tackled so tall an order as *Time, Continuity and Contingency*. It is also gratifying to notice that another student has written of New England in American literature since 1900. It is not known generally that until recently McGill was the only university in Canada to offer systematic instruction in one of the liveliest and most provocative literatures of our time, that which is being written on this continent, in Canada and the United States.

But the titles speak best for themselves.

MASTER OF COMMERCE

NELLES, JAMES GORDON, B.Com. (McGill)
The Economic and Commercial Aspects of Aviation in Canada

WEISSENBURGER, PIERRE CHARLES ALBERT, B.Com. (McGill)
Wine in Canada: A Study of the Economic, Fiscal and Legislative Aspects of the Production and Sale of Wine in Canada

MASTER OF ARTS

BAKER, KENNETH GORDON KERLEY, B.A. (McGill)
Party Government in France: With an Historical Outline of the Third Republic

BATESON, NORA, B.A. (University of Manchester)
John Neilson of Lower Canada, 1818-1828

BERRY, JOHN WALTER, B.A. (McGill)
The Peopling of Canada: A Statistical Analysis of Population Expansion in Canada

BINMORE, MARY ELIZABETH, B.A. (McGill)
The Development of Appreciation Through Creative Self-Expression

BOWKER, ERNEST ELWYN, B.Com., M.A. (University of Alberta)
Unemployment Among Dock Labourers in Montreal

CALDER, ALICE DELPHINE, B.A. (McGill)
New England in American Literature Since 1900

CARL, SELMA CHRISTINE ELEANORE, B.A. (McGill)
Grillparzers Tragoedien

CARPENTER, LULA A., A.B. (Hunter College)
Le juif dans le roman français d'après-guerre

CHALLIES, GEORGE SWAN, B.A. (McGill)
The United States of Europe

CRAIG, GLENN HORACE, B.A. (University of Alberta)
The Means and Modes of Living on the Pioneer Fringe of Land Settlement, with Special Reference to the Peace River Area

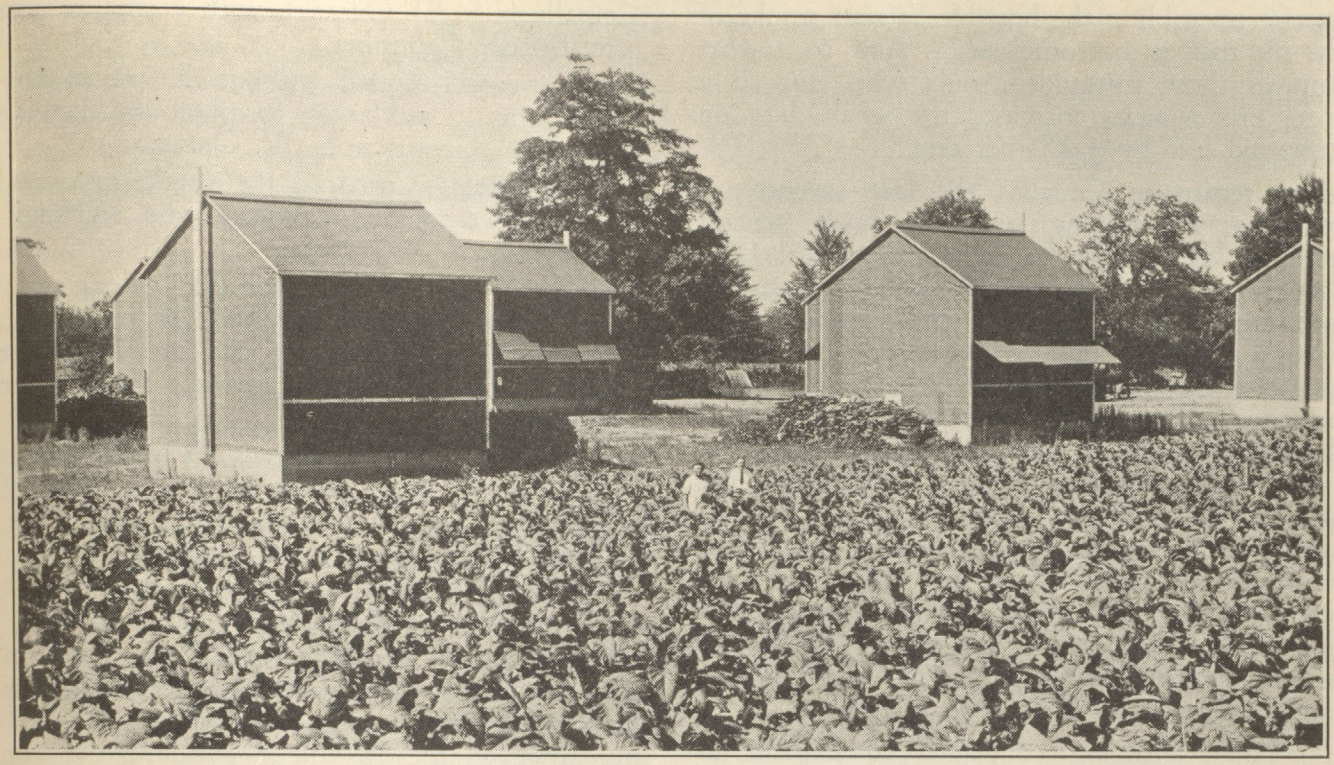
CURRIE, CECIL, B.A. (McGill)
Time, Continuity and Contingency

GREENLESS, WILLIAM STEPHEN, B.A. (Harvard University)
The Canadian Export Trade and the Depression

HARTWELL, ROBERT METCALF, A.B. (University of California)
Arthur Hugh Clough: An Impression of a Victorian

HEUSER, HEINRICH KARL-MARIA, B.A. (McGill)
A History of Trade Relations Between Canada and France

(Continued on Page 54)



CANADIAN TOBACCO

This photograph shows a field of cigarette tobacco in south-west Ontario. In the background are the kilns in which the tobacco is cured.

Canada's Lady Nicotine

By R. A. BOOTHROYD, B.S.A. '31, M.Sc. '32

SINCE the day when Columbus observed the natives of his newly-discovered Western Land whiffing fragrant leaves, tobacco has been making a conquest of the world, until now when few peoples, civilized or savage, have not become devotees of the pipe or consumers of the weed in some form. The peace-pipe of the red man has become the peace-pipe of the white man and the black man and the yellow man.

In Canada, the history of tobacco reaches back to the days of Jacques Cartier, who reported the Indian custom of "drawing smoke from dried leaves through the mouth and expelling it through the nose like smoke from a chimney." Cartier, however, took no further interest in the discovery and was not instrumental in introducing the use of tobacco into Europe.

The early French settlers on the banks of the St. Lawrence also apparently paid little attention to the custom, and it was some time before whites acquired the habit. This was in part due to the novelty of smoking, but also to governmental opposition both at home and abroad. Tobacco in Europe was experiencing what is best termed a "stormy passage." Following its introduction by Francis Hernandez de Toledo, returning to Spain from a mission to Mexico in 1550, interest was aroused in the weed, mainly from its assumed healing properties. In England, a few years later, impetus was given to smoking by Sir John Hawkins and Sir Walter Raleigh, the former being credited with its introduction into that country. The novelty spread rapidly in Spain, France, and England, until at the beginning of the seventeenth century, it met with strong royal opposition in all three countries, and later (1613) in Russia under the early Romanoffs. Of "royal haters," King James I of England easily led the field. He hated tobacco, hated Raleigh, took part in a stormy debate over the weed at the Oxford Union, and in 1604 published his famous "Counterblaste to Tobacco." A typical sample of his "blasteing" follows:

"A custome lothsome to the eye, hatefull to the nose, harmefull to the braine, dangerous to the lungs, and in the black stinking fume thereof,

neerest resembling the horrible Stigian smoke of the pit that is bottomelesse." And to further impress those misguided souls who enjoyed a pipe, His Majesty increased the small duty on imported leaf by 4,000 per cent!

To return to Canada: the late seventeenth century saw smoking becoming fairly general amongst the settlers, but it was not until 1735 that the government actually encouraged tobacco growing. The set-back to smoking in Europe was over, and despite opposition in some quarters, the habit was spreading with great rapidity. There were trade possibilities, and shortly after 1735 the home government in France endeavoured to utilize the product of the St. Lawrence settlers. The venture was not an unparalleled success. Efforts were made to improve the quality of the leaf for export purposes, but the trade never attained great proportions. The domestic product was extensively used, however, being protected from serious foreign competition by import duties.

Tobacco growing continued to expand in Canada under British rule; and, coincident with the settlement of what is now Upper Canada, the tobacco area was extended into the present main fields of production. Some of our present-day strains could probably be traced back to seed brought into Canada from the south by the United Empire Loyalists, following the American Revolution. Seed was also imported from Europe. Quebec and S. W. Ontario were the principal sections in which tobacco was grown, and there are records of shipments of leaf from Essex County, Ontario, to New Orleans shortly after the War of 1812-14. In 1871, four years after Confederation, the first decennial census of the Dominion showed that 399,870 lbs. were grown in Ontario and 1,195,345 lbs. in Quebec. Production thereafter expanded slowly but steadily, until in 1911 a total of 17,632,000 lbs. of raw leaf tobacco was recorded. Favoured by protective duties, which have played an important part in stimulating the culture of the plant in Canada, this figure has increased to 54,093,730 lbs., the total for all types of tobacco grown in 1932.

Today: Types, Uses, and Areas of Production:

Bright flue-cured—So called because the plant is cured by heat in sheds or "kilns." Used for cigarettes and pipe mixtures. Grown principally in S. W. Ontario, with a smaller region near Vancouver in British Columbia.

Burley—A larger, heavier, and darker tobacco than the above. Used for pipe mixtures, plugs, and cigarette blends. Grown principally in S. W. Ontario, with a smaller area in British Columbia.

Dark air-cured—Cured without the use of artificial heat. Used largely for plugs and chewing tobacco. Grown in S. W. Ontario.

Dark fire-cured—Cured in the smoke of wood fires. Used mainly in plugs, twist, and snuff. Grown in S. W. Ontario.

Cigar Leaf—Air-cured, except during long rainy spells when artificial heat may be resorted to as a means of speeding up the cure. Used for cigar fillers and binders. Grown in the Province of Quebec.

Quebec pipe—Cured as above. A miscellaneous collection of types grown in the Province of Quebec. Used for pipe mixtures, cigar fillers, French twist, and raw leaf smoking.

Attempts to grow tobacco of the Turkish type have been made, but with little success.

Culture: Lack of space forbids any extended discussion of the cultural methods adopted in the growing of tobacco. Up to the time of harvesting, however, the method of handling the crop is much the same for all types. The seed, which is very small—one pound producing sufficient seedlings to plant about six hundred acres—is sown in beds or greenhouses. When the seedlings have attained a height of about six inches they are set out in the field either by hand or machine. The plants are hoed throughout the summer until they show the first bloom, at which stage the top is broken off and the suckers, developing at the axis of leaves and stem, are removed. In all types, except flue-cured (cigarette) tobacco, the plants are cut down two to three weeks after "topping and suckering," or when the leaves show a yellowish mottling denoting maturity. The wilted plants are then either speared onto or hung over wooden laths, removed to the curing barn, and there hung in tiers, leaving a space of some eight inches between the laths. With air-cured tobacco the temperature and humidity are carefully controlled until the leaves take on a reddish brown appearance, the whole process occupying from ten to twelve weeks. In the case of dark fire-cured leaf, a process approximating that used in "smoking" hams is resorted to. Smoky fires are kept burning until the leaf has assumed a characteristic dark brown colour and "bacon flavour."

The method of harvesting cigarette tobacco, as practised now in Ontario and British Columbia, is technically known as "priming." Experts walk along the rows of plants breaking off only those leaves which are mature. These are tied onto laths, placed in small "kilns," and cured

out by heat. This type of curing is a specialist's job, since the whole process takes only about four or five days and an error of judgment may result in a poorly coloured cure. The ideal colour is a bright lemon or orange. Great care is taken in the regulation of temperature and humidity while the cure is in progress, an experienced handler being on duty day and night.

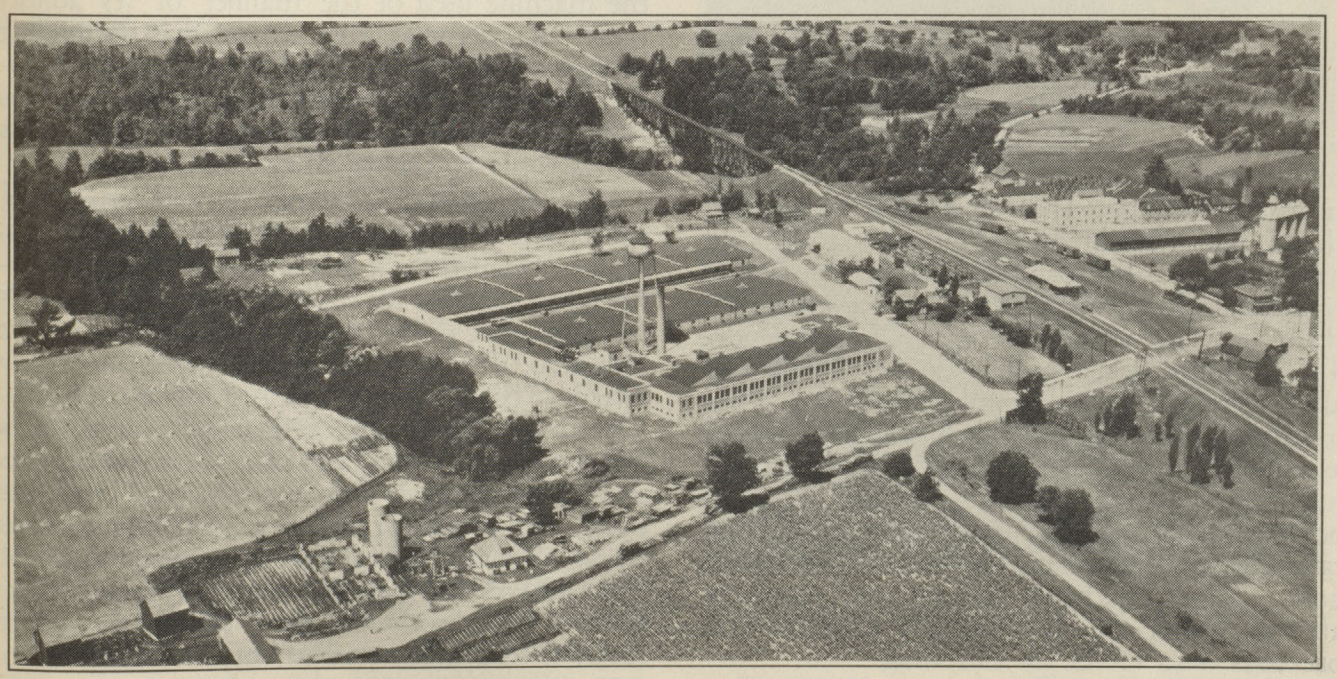
Following the curing process, the air and dark fire-cured plants are stripped of their leaves. These are then graded on the basis of body, texture, colour, and size. Cigarette tobacco, being in the single leaf form, involves no stripping. It is removed from the laths and graded by experts. To the uninitiated there is little apparent difference between many of the grades, but there is often a difference in price between the lowest and highest usable grades of as much as thirty-five cents per pound. Following grading, the leaves are tied into "hands" of fifteen to twenty, bound at the base by a single leaf. These hands are hung in a heated room where the leaf is allowed to dry out completely. The moisture content is then raised to a predetermined amount (11 to 14%) which allows of handling the tobacco without breaking, but which is not sufficiently high to permit moulding. The re-moistened hands are then packed in bales or hogsheads (large wooden barrels) and kept in storage until such time as the manufacturer chooses to use them. The tobacco is usually aged for at least two years in hogsheads before being made into cigarettes.

Air-cured tobaccos are not dried out following grading. The leaves are made up into hands which are then piled or "bulked" for fermentation, a process caused by chemical agencies present in the leaf. The reactions, which produce a darker but more aromatic type of leaf, generate a certain amount of heat, and it is necessary to shake out and rebuild these bulks or piles several times to prevent overheating and damage to the crop. When the fermentation is completed, the hands are packed into bales for storage.

Manufacturing Methods: A whole book could be written on this phase of the industry. We shall consider, therefore, only the main steps in the conversion of leaf tobacco into cigarettes, pipe mixtures, and cigars.

Cigarettes: Methods of handling the leaf, blending, and other processes in the manufacture of cigarettes may vary considerably, according to the type of product required or the organization of the company engaged in manufacturing. The following outline, therefore, is not necessarily applicable in the evolution of all types or brands.

Following curing, and after ageing for two or more years, the leaf is taken out of the hogsheads and brought into condition by passing through live steam. It is now in a sufficiently pliable form to allow of removing the large midrib by machine. A certain amount of blending



COURTESY OF CANADIAN AIRWAYS, LTD.

THE PLANT OF THE IMPERIAL TOBACCO COMPANY, LIMITED, DELHI, ONTARIO

This is a modern plant in which tobacco is graded, packed, and stored. A field of flue-cured tobacco appears in the foreground.



BURLEY TOBACCO IN B.C.

The mottled leaves indicate that the plant is ready for harvesting. This type of tobacco is used for pipe mixtures, plugs, and cigarette blends.

may then be effected, the mixture being replaced in hogsheads until required for use. Reaching the factory proper, the hogsheads go into a steam sweating room where the leaf is removed, reconditioned, picked over, and finally pressed into cakes for cutting. The cutting is done on machines, width of shred being adjusted to suit the requirements called for in any particular brand of cigarette. To ensure a clean cut, the knives are changed frequently, often every five minutes. The shredded leaf is now dried, cooled, and allowed to mellow for some time before going to the cigarette-making machine. As uncanny as a linotype machine, this complicated mechanism may turn out as many as two thousand cigarettes per minute. It also prints the trade name upon each cigarette, sometimes in two colours or in gold. Other machines package the cigarettes, affix the Excise stamp, and deliver the completed packages onto tables for cartoning.

Untouched by hand after the tobacco enters the cigarette-making machine, whatever evils may lurk within one of these pale cylinders, dirt is most decidedly not one of them. The almost unearthly cleanliness of a cigarette factory must raise a faint blush to the cheek of even the modern baker.

Cigars: A few years ago, all cigars, from the nickel "kill-me-quick" to the choice product of Vuelta Abajo, were made by hand. Today, although machinery has not entirely displaced the cigar-maker, it has made definite inroads into the field of manufacture.

There are three parts to a cigar: the filler or central portion constituting about seven-eights of the whole; the binder, which secures the filler leaves from becoming deranged or falling apart; and the wrapper, which secures the whole, helps to preserve the shape, and gives a good appearance to the finished article. Incidentally, no cigar wrappers are grown in Canada. They are very thin, silky leaves, imported, for the most part, from Java and Sumatra.

Oscar Hammerstein, musical impressario, invented the cigar-rolling machine. The many types now in use work on the same general principles. With a few mechanical movements the machine selects a filler, lays it straight, to ensure perfect combustion, then tightly wraps a binder around it, at the same time trimming and turning the ends. The wrapper is then applied, a light smear of gum tragacanth being sometimes used to secure the loose end. Completed cigars are then inspected and boxed. The shape, size, and style of cigar are dependent on the machine used or the manner of its adjustment. A somewhat recent departure in the grading of cigars has been the application of the photo-electric cell, which sorts them into various colour-grades hitherto accomplished much less satisfactorily by the naked eye.

Pipe Mixtures: After curing and processing, pipe tobacco is packed very tightly into hogsheads. From these it is pried loose with a crowbar when required for manufacture, and the hands are split apart with wedges. After the leaves are separated, they are wetted down and thoroughly softened before being stripped of the midrib. The rib out, the leaves are then pressed into cakes and fed to the keen blade of a knife, which cuts them into shreds or flakes as desired. From the knife, the shreds or flakes go to long troughs where they are baked dry at a temperature of from 200 to 400 degrees. The mixture is finally allowed to absorb moisture (about thirty per cent.) before being packed into containers.

To ensure the fullest measure of enjoyment from a pipe mixture, loss of moisture should, as far as possible, be prevented. Even in one's

tobacco pouch, a slice of orange peel or a small piece of apple will keep humidity up and flavour sweet.

Business Relationships and Trade: With the exception of the bright flue-cured industry, tobacco production in Canada is largely in the hands of small individual growers. In Quebec, grain crops and live stock are raised on most tobacco farms, while in Ontario many growers produce fruit and truck crops, such as apples, tomatoes, potatoes, and beans. The bright flue-cured industry has developed along somewhat different lines. The units are much larger and approximately fifty per cent. of the production is in the hands of eight large producing syndicates working on a share basis with growers. Profits are divided on a *pro rata* basis. These companies are associated when selling on the export market.

During the past ten years, favoured by protective measures, the total amount of tobacco, all types, produced in Canada, has more than doubled. Most rapid development has been made with flue-cured. In 1924 production amounted to some five and one-half million pounds; last year it was almost twenty-eight million. Production of Burley has fluctuated considerably, reaching a peak of over twenty-two million pounds in 1927. In 1932 it stood at sixteen and one-half million pounds. During the last few years there has been a slight drop in dark fire-cured, cigar leaf, and Quebec pipe. Such drops can, for the most part, be accounted for by the present depressed economic conditions and changes in smoking tastes.

The domestic market constitutes the most important outlet for the Canadian crop, and it is significant that imports from other countries, in particular the United States, are decreasing. This is mainly due to the improved quality of the Canadian product during the last few years, following the introduction of more satisfactory varieties and improved farm practices. Unfortunately this has not been accompanied by an increase in prices paid to the grower, the average price per pound for flue-cured last year being only about half that prevailing in 1930.

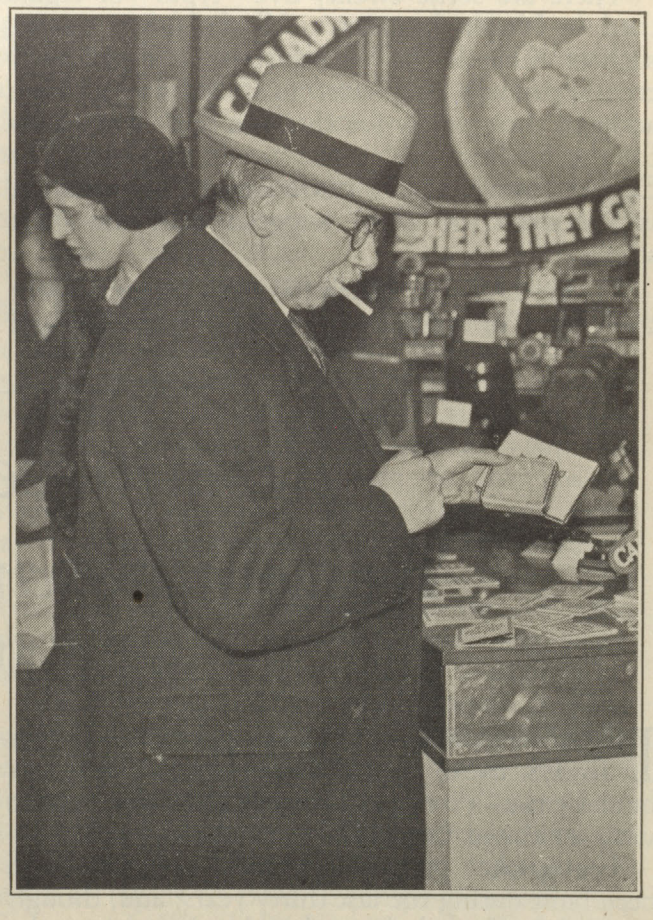
Exports of Canadian tobacco have increased rapidly. This is particularly true of flue-cured, shipments in 1932 being over three times those of 1931. Improved leaf quality and the enterprise shown by Canadian government officials in exploring the trade channels were largely responsible for this very satisfactory increase. The principal market is the United Kingdom, and it is pertinent to note that Empire-grown tobacco has been making great headway in this market during the past two or three years. The fact that Canadian bears a closer resemblance to American tobacco than other Empire types should be of considerable value in the future export trade.

Government revenues collected from tobacco products amounted to $37,104,138 in 1932, some five millions less than the peak year of 1930.

Odds and Ends. The following miscellaneous bits of information are given without pretense to any sequence or arrangement. They may be of interest to those who are users of the weed in one form or another.

It is impossible to get the slightest idea of the quality of a cigar by holding it, unlighted, horizontally under the nose and sniffing at it—a custom very general among smokers. Experts appraise cigars on five counts: burn, aroma, taste or flavour, colour, and workmanship.

In the unsmoked form, cigars usually contain the highest amounts of nicotine, followed by pipe mixtures, Turkish and Virginia cigarettes. The



THE FIRST ALL-CANADIAN CIGARETTE ON THE BRITISH MARKET

The Right Honourable J. H. Thomas, British Secretary of State for the Dominions, is shown smoking this cigarette, when all-Canadian cigarettes were first placed on the British market at the British Industries Fair in 1932.

deeply inhaled smoke from a cigarette is supposed to come into contact with nine hundred or more square feet of lung surface area.

Besides being used for cigarettes, cigars, and pipe mixtures, tobacco is used for snuff, chewing, plant sprays, lice killer, an internal corrective for some animals, and as a cure for asthma.

Light-coloured cigars are not necessarily mild. Cubans, who are notably partial to mild tobacco, avoid smoking light-coloured cigars just as much as they avoid eating green oranges or unripe bananas.

The brown stain which appears on the fingers of cigarette smokers is not due to nicotine. It consists mainly of tar oils and resins occurring naturally in the tobacco.

Literary smokers: Milton, Burns, Scott, Dickens, Lamb, Longfellow, Browning, Goldsmith, Carlyle, Mark Twain.

Literary non-smokers: Shelley, Swift, Cowper, Goethe, Ruskin, Hugo, Bryant, Macaulay, Whittier, Balzac.

There are some twenty-five "types" of cigars used in North America. All the fancy names, such as "Caballeros," "Exclusivos," "Panatelas," etc., apparently originated in Cuba, having been adopted there partly for their euphony and partly for the qualities which the words suggest. The English equivalent of "Entre Actos," for instance, is "between the acts," suggestive of the short smoke.

For the Defence: Much has been written about the effects of tobacco on mental efficiency and health. Though the evidence is contradictory, it is clear that smoking among juveniles is to be definitely discouraged. Mature persons show apparently no ill-effects from a moderate use of tobacco. Taken to excess, smoking, like any other indulgence, will have an unfavourable reaction on the human mechanism. The brief history of four centuries, however, shows ample compensation for any slight physical harm tobacco may have done, in the friendliness and fellowship it has promoted among men. Smoking affords a mental release to early repressions, gives us a sense of being grown up, and helps to satisfy an age-old, organic hunger for something on which to bite and chew. Whether it will live built into the fabric of humanity, or die like a discarded fashion, will depend, in the long run, on the pleasure or pain it brings to that entirely mythical being, the average man or woman.

There is not a little truth in the satire of G. L. Hemminger:

Tobacco is a dirty weed,
I like it.
It satisfies no normal need,
I like it.
It makes you thin, it makes you lean,
It takes the hair right off your bean;
It's the worst darn stuff I've ever seen,
I like it!

But there is both truth and a more comforting type of philosophy in the phrase of Charles Kingsley: "A lone man's companion, a bachelor's friend, a hungry man's food, a sad man's cordial, a wakeful man's sleep and a chilly man's fire."

Reminiscences of a Reconnaissance Engineer

By F. A. WILKIN, Sci. '95

PEOPLE take a railway for granted. It was always there, they consider, or perhaps was built by the "Pioneers," a hardy race now extinct who inhabited Canada in early days.

The greater part of Canada's railways have been built during the last thirty years, and, though somewhat slowed down by the depression, the process is continuing. Before a railway can be built it must be staked out on the ground, "located" is the term, and obviously a survey party cannot be sent out to locate a line unless they know where they are going, and also that the line they run is the best one.

Before location, then, a reconnaissance must be made. The reconnaissance engineer examines the country, and selects in detail the position of the proposed line. The best river crossings, the most suitable mountain passes, and the richest tributary country are wanted, and of course rates of grade and costs of construction and operation must also be considered.

Lines, except short branches, usually traverse

unsettled districts, with no hotels, no inhabitants, no roads, and no bridges. It may easily happen in such circumstances that problems of transport and subsistence, being immediate and pressing, take on an unjustifiable importance, and obscure the primary purpose of finding the best line from the shareholders' point of view.

The transport varies; blankets and supplies must be carried, a tent is useful but not necessary. The instruments are pocket ones, barometer, compass, hand level, and maps. The party consists of the engineer and transport only. On prairies a light spring waggon, two horses, and a driver; in the mountains, if there is a trail, a pack horse and a packer, if no trail, no horse, and the supplies and equipment are reduced correspondingly. Dog-teams and canoes also have their place.

The writer made a winter trip in Northern Manitoba, starting from Gimli with a dog-team and an Icelander, and picking up at Fisher Bay another dog-team and two Indians. From Fisher Bay the party headed in a northerly direction, through jackpine and muskegs that were practically impassable except in winter. The trip lasted a month—the month of January—the tent was burnt down the first night out, and for the rest of the month we slept outside. The temperature varied probably from 20 to 50 degrees below zero. No roads, no trails, the engineer went ahead on snowshoes, picking out the route by compass and breaking trail, next came an Indian, and then the two dog-teams with their drivers, doing about twelve miles a day in the bush.

The dogs, typical sleigh dogs, were ferocious animals, and could never be let loose. They would attack anything, and were always ready for a fight. At lunch time the rear end of the toboggan was tied to one tree, the dog-team strung out, still in their harness, and the leader tied to another tree, so that they could not get at each other. Five dogs to a team, and fed once a day, in the evening. At night the dogs were unhitched, each dog was chained to a separate tree, and a branch from an evergreen was cut for him to lie on, off the snow. His meal was fish (pickerel), if we were near the lake, otherwise corn-meal porridge with lard in it, one and a quarter lbs. of meal per dog per day, poured on the snow red hot and eaten that way. Alternatively, when fish could be had, he was given five lbs. of frozen fish—two gulps and a wriggle.

For ourselves, having no tent, we cut trees and built a three-sided enclosure, about ten or twelve feet square and three or four logs high, floored this with a foot of green boughs, then cut enough dry wood to keep a good fire going all night, the full length of the fourth side. The sides made a wind-break and also reflected the heat of the fire. If the wind changed during the night, it meant swinging the logs around so as to get the fire on the lee side.

We ran rather short of supplies on that trip, and were very glad to eat a lynx, tender red meat, better than deer meat, and highly esteemed in those parts.

The return trip was made down the ice of Lake Winnipeg, good going on the packed snow, 35 miles a day, with a grand burst of rather more than 80 miles for the last day and a half. It was all running, no riding on the toboggan, and the dogs were pretty well all in, and had sore feet from ice forming between the toes.

As we got down the lake, there were camps of Icelanders fishing. The Icelandic driver knew them all, so we would drop in to a camp for coffee every fifteen miles or so. Fishermen in winter and farmers in summer, the Icelanders had their families with them, and it was an open question whether the excellent coffee, or the blond daughters, were the attraction. They were a hard-working and contented people, the women doing their full share, lending support to the hypothesis that the closer a people is to nature the more of a helpmate is the woman; the converse of this however seems to be modified by racial characteristics.

Another trip was made by canoe around the Big Bend of the Columbia River from Golden to Revelstoke, a very pleasant trip, no hardship, but not particularly safe. A man is said to be drowned on every second trip. One of my two canoemen was drowned on his next trip, the following summer, a victim to the law of averages. Every bend on the river and every rapid commemorates a fatality, Boyd's Canyon, Priest Rapids, etc., for this river has been a trade route and highway since 1809. In the 200 miles we took the canoe out of the water only twice, establishing what was said to be a record.

About 30 miles below Beavermouth is Kimbasket Lake, seven miles long and perhaps two miles wide a beautiful sheet of water unspoiled by man. These canoemen had stories of a nature-writer they had guided to this spot that he might kill a grizzly. From Kimbasket Lake are 26 miles of rapids to Boat Encampment, where the Canoe and Wood Rivers join the Columbia. The name Boat Encampment was given by David Thompson, the first white man to reach the Columbia from the east. He came through the Yellowhead and down the Canoe in the

spring of 1809, reaching the Columbia short of supplies. He camped there two or three months, building boats, while some of his men went back to Fort Assinaboine for supplies.

Death Rapids, or Dalles des Mortes, downstream from Boat Encampment, we portaged. We ran the Surprise Rapids, a fall of 29 feet in a mile, which is fast going for a big river.

The grizzly is always a possibility in the B.C. mountains. They do not climb trees, but have a habit in the spring of rearing up beside a tree and reaching as high as possible to put their claw marks in the tree. The next bear coming along measures himself against these marks; if he can put a set above them, he does, and bear number one, seeing these marks above his own, leaves the district. If number two cannot reach number one's marks, he leaves.

Travelling up the Elk River about 30 miles from the railway, one spring day, with the wet sleet and snow lying about six inches deep on the ground, we came on an enormous grizzly's track, so fresh that the water was still running into the tracks, and the "finger" prints were clearly marked. Our joint armament consisted of a .22 pistol with a ten-inch barrel, a weapon whose effectiveness was strictly limited. For the rest of that summer while on that work I left my blanket behind and carried a high power rifle instead.

The best grizzly country is perhaps the Bella Coola district. I was shown there a skin that measured twelve feet from snout to tip of tail, said to be the second largest known. The largest one, thirteen feet long, was shot by the same man. It was there that the clerk in the trading post had a badly scarred face. He had had his head in a grizzly's mouth, before he killed the bear with a knife. Everyone in the district had a personal bear story. The boat in winter called irregularly every two or three weeks. You heard the boat whistle, then went to the wharf. A would-be passenger, who had been waiting two weeks for a boat, was treed by a grizzly on his way to the wharf, and kept there till the boat had left.

In British Columbia, a mining country, no one asks questions. An engineer can openly investigate as much as he likes. On the prairie the agricultural life evidently develops the faculty of curiosity, and it becomes necessary to dissemble to some extent. At that stage of a country's development it is simple to pose as a land-seeker. I was told by a farmer thirty miles east of Lethbridge, that I must be very hard to suit, as he had seen me looking for a homestead south of Prince Albert four years previously.

Reconnaissances have been made on a Hudson Bay ration—a club and a rabbit track. The man is given the club, and shown the rabbit track, and there is his supper. It has been said by the men who located the Grand Trunk Pacific east of Winnipeg, that the only way to cook an owl is to boil it. The reconnaissance engineer must always travel light, hence the above housekeeping hints.

The Graduates' Society

PAST STUDENTS ELECTED TO MEMBERSHIP DURING THE SESSION 1932-1933

Bercovitz, Ruth B., Commerce 1933
Cameron, Margaret B., Arts 1932
Chaplin, Herbert E., Engineering (Elec.) 1933
Charbonneau, J. Pierre, Commerce 1932
Coates, A. Harold, Medicine 1910-1911
Cowan, George C., Engineering (Elec.) 1933
Cowie, Frederick W., Engineering (Civil) 1933
Craig, Beulah F., Commerce 1932 (Alumnae)
Craig, Gibson E., Commerce 1932
Creighton, D. B., Commerce 1919-1920
Daykin, Charles E., Medicine 1933
Denenberg, Benjamin, Dentistry 1933
Duval, Henry P., Engineering (Mining) 1933
Ellis, Audrey L., Physical Education 1929-1931
Fenton, Mary F., Arts 1933
Fitzgerald, Frederick W., Medicine 1933
Gilmore, Alice E., Arts 1931
Gerard, Voligny, Commerce 1932
Grayson-Bell, Bryce, Commerce 1932
Griffiths, Harry E., Commerce 1933
Herman, Harry, Law 1933
Howe, Hazel M., Commerce 1932
Imobersteg, Anna, Grad. Nurse 1932
Johnson, Harold M., Arts 1933
Kay, Alan Geoffrey, Engineering 1933
Loucks, J. Norman, Commerce 1932
McCormick, Douglas G., Commerce 1933
McCormick, Paul H., Commerce 1932
McCrudden, Harry E., Arts 1915
McDunnough, Philip Nelson, Engineering (Elec.) 1933
McGill, Frank, Commerce 1913
MacKinnon, Charles W., Commerce 1933
Marshall, Adam S., Engineering 1932
Marshall, James, Grad. School 1931-34
O'Reilly-Hewitt, F. T., Commerce 1933
Power, Edmund deG., Arts 1909-1911
Rose, Arthur, Commerce 1933
Schnee, Charles F., Medicine 1933
Wilkinson, Arthur, Engineering 1933
Woods, J. H.

A McGill Conspectus

June—September, 1933

(WHEREIN *The McGill News* PRESENTS IN CONDENSED FORM SOME DETAILS OF THE UNIVERSITY'S RECENT ACTIVITIES AND ACCOMPLISHMENTS)

HIS EXCELLENCY TO ATTEND

His Excellency the Earl of Bessborough, in his capacity as Visitor of McGill University, will attend the Fall Convocation on the 112th anniversary of Founder's Day, Friday, October 6, 1933, and on the same day will lay the corner-stone of the new Neurological Institute. Construction of the Institute is proceeding in accordance with plans and it is believed that the building will be ready for occupancy in February, 1934.

GIFTS TO THE UNIVERSITY

Among the notable gifts to the University reported by the Principal to the Board of Governors in July were $50,000 from Sir Herbert Holt, completing his subscription of $100,000 to the new Neurological Institute; and $20,000 from J. W. McConnell, Esq. and $12,500 from Walter M. Stewart, Esq., on account of their respective subscriptions of $100,000 and $25,000 to the Neurological Institute. Other gifts included: $50 from Mrs. A. D. Blackader to the Blackader Pharmacological Library Fund; $200 from Charles E. Frosst and Company to the Paediatric Fund; $100 from the Medical Undergraduates' Society to the Medical Library; and $100 from Anonymous to the Medical Library.

ADDITIONAL GIFTS

In addition to the gifts mentioned above, Sir Arthur Currie reported to the Governors the following contributions: To the Travelling Library Fund—$616 from Miss Isabella McLennan, $100 from the Hon. J. S. McLennan, $100 from Dr. Francis McLennan, and $120 from the Province of Quebec Committee of Protestant Education. To the Department of Industrial and Cellulose Chemistry—$250 from Harry Bronfman, $150 from the Interlake Tissue Mills Company, Limited, Toronto, and $200 from the Fraser Companies, Limited, all these being part of subscriptions previously recorded. To the Faculty of Engineering—$100 from the Women's Auxiliary of the Canadian Institute of Mining and Metallurgy to the Loan Fund. To the Department of Botany—$1,000 from the National Research Council of Canada.

DEATH OF DR. HAMILTON WHITE

Members of the medical profession in Canada and a wide circle of non-professional friends learned with deep regret of the death of Dr. E. Hamilton White, Professor of Oto-laryngology in McGill University and Chief of the same department in the Royal Victoria Hospital, Montreal, which occurred in the Royal Victoria Hospital on the afternoon of June 15. Dr. White, who graduated from McGill in Arts in 1899 and in Medicine in 1901, had succeeded Dr. H. S. Birkett as Chief of the Department of Oto-laryngology in the Royal Victoria Hospital in November 1930. Paying tribute to his memory, Dr. Birkett said, in part: "As a colleague he was beloved and greatly respected, as an operator he was unexcelled; personally, I feel deeply the loss of this splendid colleague, and the public has lost a valued and able physician."

DR. D. H. BALLON APPOINTED

In succession to Dr. E. Hamilton White, whose death occurred on June 15, Dr. David H. Ballon was on July 5 appointed Chief of the Department of Oto-laryngology of the Royal Victoria Hospital, Montreal. Dr. Ballon graduated from McGill in Arts in 1908 and received his medical degree in 1909. His first staff appointment at the Royal Victoria Hospital was in 1913, and in the following year he became a demonstrator in oto-laryngology at McGill. In bronchoscopic work, his recent achievements have won for him recognition of an enviable order.

UNIVERSITY FINANCES

No further increases in University fees or reductions in salaries and wages are contemplated at the present time, according to a report presented by Sir Arthur Currie to the Board of Governors on July 14. The Principal in the same report informed the Board that, due to the loyal co-operation of the heads of all departments, the University's estimated deficit for the year of $297,000 had been reduced to an actual deficit of $223,000. Salaries in the year had been reduced by a total of $31,217, wages by $14,486, and appropriations by $80,965. At Macdonald College the reduction in salaries, wages, and appropriations had totalled $33,419.

ARCTIC PARASITOLOGY

In June it was announced that Dr. Ivan W. Parnell, a member of the staff of the University's Institute of Parasitology at Macdonald College, would join the Eastern Arctic Expedition, sailing from Montreal on July 8, and would inaugurate a study of the parasites in a number of wild animals in northern Quebec. Though the efforts of the Institute have hitherto been confined to domestic animals, a study of the parasites of fur-bearing animals has long been desirable. Arrangements between the University and the Dominion Department of the Interior were accordingly made and Dr. Parnell was selected to make the inaugural investigations. Heavy losses of fur-bearing animals through the action of parasites are known to occur and the economic factor involved has long invited serious consideration.

ADAMS SCHOLARSHIPS

The Adams Geological Scholarship to the value of $600, established through the generosity of Dr. Frank D. Adams, Emeritus Vice-Chancellor of the University and Emeritus Dean of the Faculty of Graduate Studies

(*Continued on Page 48*)

Dr. Ruth Dow

The outstanding scholastic career of Miss Ruth Dow, 1933 winner of the Holmes Gold Medal for highest aggregate standing throughout the medical course at McGill, has been watched with interest by all who have been associated with her during her seven years at the University.

Coming to Canada from Dundee, where she had matriculated from the Dundee High School as Dux in Classics, Miss Dow taught for a short time in the Deaf and Dumb School in Montreal, before entering the Faculty of Arts, in Second Year, in the session of 1926-27, with the Robert Bruce Scholarship.

After an exceptionally fine undergraduate record, she received her Arts degree in 1929, and immediately entered the Medical School, in which she won honours in each of her undergraduate years. The Jackson Prize for Pathology and the Sutherland Medal for Biochemistry were among the awards that she carried off, and she brought her undergraduate days to a brilliant conclusion with first place aggregate standing in the final year of medicine, and the Holmes Medal for highest aggregate throughout the course.



—Notman

Dr. RUTH DOW

A McGill Conspectus

(*Continued from Page 47*)

and Research, has this year been divided equally between Norman Leslie Wilson, M.Sc. '33, formerly of the University of Saskatchewan, and Vladimir J. Okulitch, formerly of the University of British Columbia. The recipients will continue their scientific work at McGill, specializing in petography and stratigraphy and paleontology respectively.

CANADA-ARGENTINE SCHOLARSHIP

The Canada-Argentine Scholarship, established in 1931 through the combined interest of the Royal Bank of Canada, the Sun Life Assurance Company of Canada, and the Canadian National Railways, has been awarded this year to Adolfo H. Alsina, a graduate of the University of Buenos Aires, who will enter the McGill Faculty of Engineering this autumn.

DR. HUSKINS HONOURED

Dr. C. Leonard Huskins, Associate Professor of Genetics in McGill University, has been awarded a D.Sc. degree in botany by the University of London, England. Dr. Huskins, who is a graduate of the University of Alberta, where he received B.S.A. and M.Sc. degrees, and of the University of London, where he received his Ph.D., earned this most recent award in recognition of the eight works he has published on genetics and cyto-genetics.

1851 EXHIBITION SCHOLARSHIPS

In July it was announced that two McGill postgraduate students, James S. Tapp, Ph.D. '33, and Robert N. Haslam, Ph.D. '33, had been awarded 1851 Exhibition Scholarships for the current year. These scholarships to the value of $250 a year are tenable overseas for two years. McGill's record in the winning of them in the past has been a notable one and the scientific achievement of the men successful in obtaining them has added to the reputation of the University abroad. The quality of the work accomplished by the winners this year gives assurance that this circumstance will continue.

MANY PAPERS CONTRIBUTED

Statistics compiled at the request of Sir Arthur Currie by Dr. G. R. Lomer, University Librarian, and published in July, show that members of the McGill staff contributed approximately 500 papers and articles to scientific and other journals during the academic year 1932-'33. The Faculty of Medicine led with 150 contributions. An outstanding publication of the year was Dr. W. L. Graff's book "Language and Languages: an Introduction to Linguistics," reviewed in *The McGill News* in March. Other notable volumes included Stephen Leacock's "Mark Twain" and the late Professor W. T. Waugh's "History of Europe from 1378-1494." Dr. W. B. Howell's "Medicine in Canada" appeared after the academic year ended.

PROFESSOR LLOYD HONOURED

Professor F. E. Lloyd, Macdonald Professor of Botany and former President of the Royal Society of Canada, was present in July at the Jubilee ceremonies of the University College of South Wales and Monmouthshire and received a D.Sc. degree, honoris causa. In conferring the honorary degree, Professor R. C. McLean mentioned Professor Lloyd's work, through which he has become known as one of the foremost of plant physiologists.

SUMMER MUSEUM COURSE

The unenviable position held by the City of Montreal through the inadequacy in numbers of its public museums and the correspondingly enhanced value of such collections as those of the Art Association, the Château de Ramezay, and the McCord National Museum was stressed by Abbé Olivier Maurault, Director of the Externat of St. Sulpice, in a lecture on "The Future of Museums and the Nation" which opened the bilingual summer course in general museum technique at the University in June. The importance of museums to the community as centres of teaching and research has been widely recognized in recent years and the service rendered by McGill in organizing a bilingual course, attended this summer by more than 30 students, has received warm public approbation.

VISIT OF GERMAN DIPLOMAT

Among the visitors to the University this summer was His Excellency Dr. E. A. Voretzch, retiring German Ambassador to Japan. Dr. Voretzch, who is a noted Sinologist, was deeply interested in the Gest Chinese Research Library and stated after an inspection of its contents that it constituted undoubtedly one of the finest collections of Chinese works to be found in the Western world. In the Redpath Library Dr. Voretzch noticed one of his own volumes on Chinese antiquities and, at the request of the University Librarian, autographed the book, expressing pleasure in leaving this memento of his visit in the University's shelves.

OKLAHOMAN VISITORS

Commissioned by the Governor of their state to make a survey of universities in Eastern Canada, Monsignor F. C. Kelly, Bishop of Oklahoma, and a party of representatives of the University of Oklahoma visited McGill in August and were shown about the campus and buildings by the Director of the Department of Extra-Mural Relations. Monsignor Kelly, who is a native of Prince Edward Island, was particularly interested to hear of the McGill Summer Library School, conducted this year in Charlottetown, and which, at the time of his visit, had just been brought to a most successful conclusion.

MEDICAL COURSES DISCUSSED

Dr. Charles F. Martin, Dean of the Faculty of Medicine, was the guest of honour at the annual banquet of the Alpha Omega Alpha Honours Fraternity held in Milwaukee on June 15, and chose as the subject of his address "The Making of a Medical Practitioner." Dr. Martin discussed the problems that had arisen through the standardization of medical training in the colleges

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of North America, the difficulties consequent upon the long courses now required, and the excessive attention paid to the laboratory sciences and the specialties. Solution of these problems could not easily be reached, but the fact that the difficulties had been recognized and were admitted to exist held out hope for improved university methods of producing sound practitioners.

QUEBEC WOMEN'S CONVENTION

Addressing the twentieth annual convention of the Quebec Women's Institute at Macdonald College in June, Sir Arthur Currie explained that, in the founding of the College, Sir William Macdonald had been influenced by the desire to create an institution to help those who live and work and spend their lives beyond the city's pale. Through the work of the Faculty of Agriculture for men and the School for Teachers and the School of Domestic Science for women, Sir William's dream was being realized. But Sir Arthur felt that more could be accomplished. He emphasized that it was the ambition of the College to turn out "well grounded, all-round, highly educated" men and women and intimated that in the preparation of the College's courses this objective would always be one of the University's chief concerns.

WOMEN'S INSTITUTE ADDRESSES

Dr. A. S. Lamb, Director of the Department of Physical Education, and Dr. Fraser B. Gurd, Lecturer in the Department of Surgery, were among those who addressed the twentieth annual convention of the Quebec Women's Institute at Macdonald College in June. Dr. Lamb pointed out that modern physical education is no longer a matter pertaining solely to the football field and the gymnasium, no longer a system of "physical jerks," but a science involving the physical, mental, and spiritual well-being of the individual and the whole population. Dr. Gurd chose as his subject the value of First Aid. Among his practical hints, he advised the use of a freshly made two per cent. solution of tannic acid for burns, instead of grease or oil, and also the use of mercurochrome, rather than iodine, as a stable disinfectant.

McGILL DELEGATES

In June it was announced at the University that Professor E. R. Adair, Associate Professor of History, would represent McGill at the International Conference of Historians, held in Warsaw, Poland, in the summer. Simultaneously it was announced that Dr. J. P. Day, Professor of Economics, would represent the University at the laying of the corner-stone of the Senate House of the University of London on June 26.

NEUROLOGY ADDRESS

Addressing the Kiwanis Club of Montreal in June, Dr. Wilder G. Penfield, Director of the McGill Neurological Institute, stressed the need in this Province for concentration of patients suffering from brain diseases and nervous disorders. Dr. Penfield stated that, while there was danger of neurological work becoming too much of a specialty, the danger had been recognized at McGill, and in the functioning of the new Neurological Institute no pains would be spared by the staff to keep in the closest possible touch with all the city hospitals and with trends in the whole field of general medicine.

McCORD SCHOOL EXHIBITS

Success of the special historical exhibits for school-children sponsored during the past academic year by the McCord Museum is attested by a report showing a total attendance of nearly 6,000. Five exhibits were arranged, covering periods from the earliest exploration of Canada up to and including Canadian participation in the Great War. To these the Canadian National Railways, the Canadian Pacific Railway Company, the Royal Canadian Mounted Police, and many private citizens contributed.

FOUNTAIN NOW FLOWING

Through the generosity of Mrs. Harry Payne Whitney, sculptress of the Good-Will Fountain, presented to the University by a group of United States citizens in 1930 and erected in the hollow in front of the Arts Building, water connections were installed this summer and the flow was turned on on the American Independence Day, July 4. The permanent setting of the fountain has been designed by Messrs. Nobbs and Hyde.

Deaths

BOURNE, AUSTIN HERBERT, Sci. '25, accidentally drowned at Brome Lake, P.Q., June 30, 1933.

CRAIG, MISS EDNA MARION, Library School, at Beaurepaire, P.Q., August 9, 1933.

CULLY, DR. JAMES H., Med. '21, at Pembroke, Ontario, July 19, 1933.

DEMERS, MAURICE P., past student in Commerce, in Montreal, May 22, 1933.

FINNIE, MRS. ALFRED D. (Ida Pearl Leslie, Arts '14), in Montreal, July 30, 1933.

FORAN, HERBERT PAUL, M.Sc., Arts '21, in Toronto, June 5, 1933.

FORTIER, DR. SAMUEL, B.A.Sc. '85, M.A. '96, D.Sc. '07, in Oakland, California, August 18, 1933.

GAIRDNER, DR. THOMAS M., Med. '86, in Philadelphia, Pa., August, 1933.

GALE, DR. HUGH M., Med. '82, in Bay City, Michigan, February 9, 1933.

GIBSON, DR. GORDON MOORE, Med. '04, in Brooklyn, N.Y., June 18, 1933.

GOLTMAN, DR. MAXIMILIAN, Med. '14 (ad eundem), in Memphis, Tennessee, June 17, 1933.

GORDON, THE REVEREND JOHN SIMPSON, Arts '93, in Vancouver, B.C., June 25, 1933.

HANSON, LT.-COL. ALBERT C., Arts '95, Law '96, at Sweetsburg, P.Q., May 30, 1933.

MARTIN, DR. SIMEON HENRY, Med. '92, in Montreal, June 29, 1933.

MASSE, THE REVEREND GODEFROI NARCISSE, Arts '84, at Grande Ligne, P.Q., July 8, 1933.

McINTOSH, Dr. DONALD J., Med. '70, at Vankleek Hill, Ont., June 9, 1933, aged 88 years.

MULVENA, HENRY DESMOND, past student, Law '27-'28, at Ste. Agathe des Monts, P.Q., June 12, 1933.

RAMSAY, DR. IRVING D., Arts '10, Med. '15, in Osaka, Japan, June 7, 1933.

RUTHERFORD, DR. CLARENDON, Med. '82, in Chicago, Ill., February 11, 1933.

SAUNDERS, FRANK CAITHNESS, Arts '96, Law '99, in Vancouver, August 26, 1933.

TURNBULL, ALAN, Sci. '13, in Toronto, June 22, 1933.

WHITE, DR. E. HAMILTON, Arts '99, Med. '01, in Montreal, June 15, 1933.

Births

BUTLER—In Toronto, on May 13, to Dr. William S. Butler, Med. '26, and Mrs. Butler, of North Bay, Ontario, a son.

COPE In Montreal, on June 16, to E. Selby Cope, Sci. '26, and Mrs. Cope, a daughter.

DESBARATS—In Montreal, on July 2, to Mr. and Mrs. Hullet Desbarats, Jr. (Margaret O. Rettie, B.A. '30), a son.

FRASER—In Ottawa, on July 23, to Andrew S. Fraser, Sci. '22, and Mrs. Fraser, of Cardinal, Ontario, a son.

GORDON—In Montreal, on July 13, to Dr. Keith Gordon, Arts '16, Med. '20, and Mrs. Gordon, a daughter.

HENRY—In Montreal, on April 27, to Dr. Hugh George Henry, Med. '29, and Mrs. Henry (Edith Lalonde, Pharmacy '24), of Germantown, N.Y., a son.

KNATCHBULL-HUGESSEN—In Montreal, on July 26, to the Hon. Adrian Knatchbull-Hugessen, Arts '12, Law '14, and Mrs. Knatchbull-Hugessen, a son.

LEGG—In Prince Rupert, B.C., on July 17, to R. E. Legg, Sci. '23, and Mrs. Legg, a son.

MacPHERSON—In Campbellton, N.B., on February 18, to Dr. John J. MacPherson, Med. '16, and Mrs. MacPherson, a son.

MATHEWSON—In Montreal, on May 11, to Samuel J. Mathewson, Sci. '15, and Mrs. Mathewson, a son.

MOTHERSILL—In Ottawa, on July 17, to Dr. G. S. Mothersill, Med. '02, and Mrs. Mothersill, a daughter.

MINNES—In Ottawa, on June 14, to R. C. Minnes, Sci. '29, and Mrs. Minnes, a son.

MUIRHEAD—In Montreal, on July 8, to Mr. and Mrs. A. G. Muirhead (Gwendolyn D. Brodie, B.Sc. '26), of Kenogami, P.Q., a daughter.

NICHOLSON—In Montreal, on July 31, to W. C. Nicholson, Arts '13, Law '19, and Mrs. Nicholson, a son.

POWELL—In Ottawa, on June 29, to Allan T. Powell, Sci. '23, amd Mrs. Powell, a son.

ROCHESTER—In Ottawa, on May 24, to Bertram C. Rochester, Sci. '23, and Mrs. Rochester, a son.

ROCHESTER—Iu Ottawa, on June 8, to Lloyd B. Rochester, Sci. '21, and Mrs. Rochester, a son.

SPRATT—In Regina, on June 21, to M. J. Spratt, Sci. '22, and Mrs. Spratt, a son.

TIMMINS—In Montreal, on July 24, to J. R. Timmins, past student, and Mrs. Timmins, a son.

TUCKER—In Montreal, on July 28, to Mr. and Mrs. Michael L. Tucker (Glen Cameron, B.A. '27), a daughter.

VON EICKEN—In Montreal, on August 3, to Mr. and Mrs. H. W. von Eicken (Jane Belnap, B.A. '27), a daughter.

WADE—In Pasadena, California, on June 16, to Dr. and Mrs. R. S. Wade (Isabella Scriver, B.A. '27), a daughter.

WADSWORTH—In Saint John, N.B., on May 31, to Rev. Dr. G. Campbell Wadsworth, Arts '23, and Mrs. Wadsworth, a son.

WALLACE—In Montreal, on May 19, to R. H. Wallace, Sci. '27, and Mrs. Wallace, of Cardinal, Ontario, a son.

WIGHT—In Montreal, on May 27, to Dr. G. Earle Wight, Med. '26, and Mrs. Wight, a son.

Marriages

ALLISON—In Montreal, in July, Miss Elizabeth Mary Books and Eric Franklin Allison, Com. '32, of Montreal.

ARMSTRONG—In Toronto, on June 3, Miss Betty Hatton and Arnold Victor Armstrong, B.Sc. '23.

BOOTH—At Greenwich, Conn., on June 23, Miss Cornelia Anne Vanderhoef, and Fred H. Booth, past student, of Ottawa.

BROOKS—In Montreal, on July 14, Miss Phyllis Edith Brooks, B.A. '30, and George Spencer Hanna, of Montreal.

BURTON—In Montreal, on August 2, Miss Viola Minnie McGibbon and Dr. Lawrence S. Burton, Dent. '28, of Montreal.

(Continued on Page 56)

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Personals

THE McGILL NEWS invites notices for inclusion in these columns. Press clippings or other data should be addressed to H. R. Morgan, Recorder Printing Company, Brockville, Ontario; or to the Executive Secretary, Graduates' Society, McGill University, Montreal. Notices for the December issue should be forwarded prior to November 15.

PROFESSOR ALFRED SAVAGE, B.S.A. '11, has been appointed Dean of Manitoba Agricultural College.

MR. JUSTICE R. A. E. GREENSHIELDS, Arts '83, Law '85, LL.D. '29, has been appointed Chief Justice of the Superior Court of the Province of Quebec.

DUDLEY WILSON, Arts '25, was the winner in the McGill French Summer School of the silver medal presented by the French Government for the highest attainment in the most advanced grade. He is a master at West Hill High School, Montreal.

A GORDON NAIRN, B.A., Law '30, has been appointed Field Supervisor of the Life Underwriters' Association of Canada.

H. M. JAQUAYS, Sci. '96, M.A. '99, M.Sc. '99, has been appointed Board of Governors' representative on the Board of Trustees of the McGill University Graduates' Endowment Fund.

DR. J. A. COUILLARD, Med. '14, Medical Superintendent of the Lake Edward Sanitorium, has been elected President of the Canadian Tuberculosis Association.

E. W. BOWNESS, Sci. '05, has been appointed Vice-President of the Dominion Gas and Electric Company and its various subsidiaries in Western Canada.

DR. LELAND A. LITTLEFIELD, Med. '31, has opened an office for the general practice of medicine at 52 Brattle Street, Cambridge, Massachusetts.

GERRARD J. JACKMAN, Com. '32, has completed a year of teaching at St. Mary's College, Halifax, where a commerce course has been instituted under his direction.

THE HONOURABLE J. SYDNEY DASH, B.S.A. '13, is the Director of Agriculture in British Guiana. The headquarters of his extensive department are in Georgetown, the colony's seat of government.

KENNETH W. SPENCE, Arts '29, M.A. '30, has been awarded a scholarship of $2,500 a year for two years by the National Research Council in the United States. His work will be at the chimpanzee farm of Yale University in Florida.

MARGARET A. McKAY, Arts '33, has been awarded a French Government Scholarship to the value of 10,000 francs and will study French in France this year.

DR. CHARLES K. P. HENRY, Med. '00, has been appointed Attending Surgeon and Chief of the Surgical Services of the Montreal Children's Hospital. He was also elected a Governor of the Hospital and a member of the Medical Board.

PHILIP J. TURNER, F.R.I.B.A., F.R.A.I.C., was appointed Professor of Building Construction in Architecture at the April meeting of the Board of Governors.

LOUISE W. HURD, Arts '26, has received the degree of Master of Sacred Music from Union Theological Seminary, New York. An anthem of her composition received most favourable comment when sung recently by the choir of Brick Presbyterian Church, New York.

DR. A. L. WALSH, Dent. '20, Acting Dean of the Faculty of Dentistry and Director of the Dental Department in the Montreal General Hospital, has been elected an Associate Member of the American Academy of Dental Science.

REV. RINALDO W. ARMSTRONG, past student, has become pastor of the United Churches at Merrickville and Burritt's Rapids, Ontario.

MAJOR J. H. EDGAR, Sci. '03, Inspector of Materials for the Canadian National Railways at Winnipeg, is co-author, with Norman Thompson, of "Canadian Railway Development from the Earliest Times," a recent publication which furnishes the first comprehensive history of Canadian railways.

REV. T. ANSON HALPENNY, M.A., D.D., Arts '05, associate pastor of St. James United Church, Montreal, has now become pastor of St. Paul's United Church, Cornwall, Ont.

WALLACE R. HENRY, Law '21, has been elected by acclamation to the Municipal Council of Sixteen Island Lake, Que.

HUGH MACKAY, K.C., Law '00, has been elected first Vice-President of the Canadian Club of New York City.

DR. RALPH FITZGERALD, Arts '19, Med. '22, demonstrator in anatomy and surgery at the University, has taken his F.R.C.S. degree at the Royal College of Surgeons in London.

MAJOR C. A. P. MURISON, M.C., past student, of the Royal Artillery, has been appointed General Staff Officer, grade two, at the Royal Military College of Canada at Kingston.

THE HON. MR. JUSTICE E. FABRE SURVEYER, Law '96, has been elected President of the St. Mary's College Alumni Association, Montreal.

BRIGADIER J. M. ROSS, C.M.G., D.S.O., past student, officer commanding military district No. 12 at Regina, Sask., has been transferred to the command of Military District No. 1 at London, Ont. He is succeeded at Regina by Group Captain J. Lindsay Gordon, D.F.C., past student, who has been senior air officer at Ottawa.

G. BLAIR GORDON, Sci. '22, has been elected a Director of the Dominion Textile Company, Montreal.

L. DANA WILGRESS, Arts '14, Director of Commercial Intelligence Service at Ottawa, was one of those comprising the Canadian delegation to the World Economic Conference in London.

WILLIAM A. MATHER, Sci. '08, has been appointed Assistant to the Vice-President, Canadian Pacific Railway, Montreal.

REV. DR. W. M. ROCHESTER, Arts '87, Editor of the "Presbyterian Record" (Toronto), attended this summer the British General Assemblies of the Prebsyterian Church held in England, Scotland and Ireland; and also the General Council of the Alliance of Reformed Churches in Belfast.

MISS WINIFRED KYDD, M.A., Arts '23, of Montreal, has been re-elected President of the National Council of Women of Canada. As such, she recently attended an executive meeting of the International Council of Women in Stockholm and also spoke at a meeting of the International Congress of Women in Chicago.

DR. H. M. TORY, Arts '90, Chairman of the National Research Council of Canada, was President of the Fifth Pacific Science Congress held in Vancouver in June and on that occasion received the honorary degree of LL.D. from the University of British Columbia. Dr. Frank D. Adams, Sci. '78, was one of the Vice-Presidents of the Congress.

HON. THIBAUDEAU RINFRET, Law '00, of the Supreme Court of Canada, has received the honorary degree of LL.D. from the University of Ottawa.

HENRY N. CHAUVIN, K.C., Law '00, of Montreal, has been elected Bâtonnier-General of the Province of Quebec by the General Council of the Bar.

J. ARTHUR MATHEWSON, K.C., Arts '12, Law '15, has been elected Chairman of the Montreal Central Protestant School Board for the current year.

GEORGE C. McDONALD, Arts '04, has been elected first Vice-President of the Society of Chartered Accountants of the Province of Quebec. Eric A. Cushing, Sci. '17, is one of the Directors of the organization.

DR. H. W. KERFOOT, Med. '06, has been elected to the Presidency of the Rotary Club of Smiths Falls, Ont.

S. F. KNEELAND, Arts '12, has been appointed Superintendent of Elementary Schools in the City of Westmount, Que. He joined the Westmount School staff in 1916 and was previously at Farnham and Richmond, Que.

REV. GEORGE F. DEWEY, Arts '13, has retired in order to return to pastoral duties after 13 years as Director of religious education at St. Andrew's United Church, Westmount, Que.

COLONEL H. A. CHISHOLM, Med. '05, has been elected President of the Halifax, N.S., branch of the Red Chevron Club.

W. M. COUPER, K.C., Law '02, of Montreal, has been re-elected High Chief Ranger of the Canadian Order of Foresters.

DR. H. P. WRIGHT, Med. '14, of Montreal, was one of the Canadian delegates to the Third International Pædiatric Congress held in London in July.

DR. G. A. B. ADDY, Med. '90, of Saint John, N.B., has assumed office as President of the Canadian Medical Association.

DR. D. W. CROMBIE, Med. '13, of London, Ont., has joined the Executive Council of the Canadian Tuberculosis Association.

MISS ISABEL E. BRITTAIN, Arts '94, has retired on pension. Miss Brittain was last year awarded the Order of Scholastic Merit, highest class, by the Provincial Department of Education after a connection of 38 years with the Montreal High School for Girls.

DR. F. M. G. JOHNSON, Sci. '04, of Montreal, has been elected President of Section Three of the Royal Society of Canada.

RICHARD P. D. GRAHAM, M.Sc., Arts '08, Montreal, is the new President of Section Four of the Royal Society of Canada.

G. GORDON HYDE, K.C., Arts '05, Law '08, has been elected Second Vice-President of the Montreal Reform Club for the ensuing year. René Theberge, K.C., Law '17, is a Director of the club.

LT.-COL. HERBERT MOLSON, C.M.G., M.C., Sci. '94, of Montreal, has been gazetted a Commander of the Order of the Hospital of St. John of Jerusalem. Among those gazetted Officers of the Order is Lt.-Col. G. G. Corbet, Med. '98. Dr. L. H. Leeson, Med. '15, becomes a Serving Brother of the Order.

MAJOR G. P. HOWLETT, Med. '06, of the C.A.M.C., has received the Canadian Efficiency Decoration as well as the Colonial Auxiliary Forces long service medal.

HON. MAJOR THE REV. W. B. HEENEY, Arts '99, of the Canadian Chaplain Service is among those gazetted to receive the Colonial Auxiliary Forces officers' decoration.

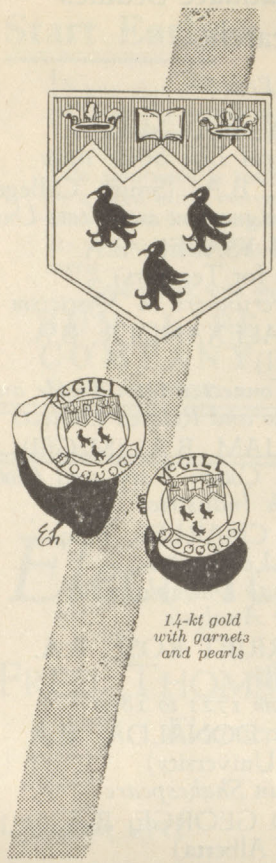
JOHN S. G. SHOTWELL, Sci. '24, has received the degree of Ph.D. from Columbia University, where he has been pursuing studies in chemical engineering with special research in air conditioning and moisture control.

REV. SYDNEY W. WILLIAMS, Sci. '24, who has been assistant priest at the Cathedral of the Holy Trinity in Quebec, has now been appointed rector of the Anglican parish of Shawinigan Falls, Que.

REV. THOMAS McNAUGHT, B.D., past student, who has been in charge of the United Church at Balderson, Ont., has now accepted an invitation to the church at Russell, Ont.

RUSSELL C. ARCHER, Arts '32, has been ordained to the ministry of the Presbyterian Church in Canada after graduation from the Montreal Presbyterian College and inducted into the pastoral charge of Cardinal and Mainsville, Ont.

(*Continued on Page 57*)



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The Faculty of Graduate Studies and Research

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HILL, OLIVE MARY, B.A. (McGill)
The English Novel of Rural Life Since 1900

JUDGE, MABEL ESTELLE, B.A. (Smith College)
Les auteurs français dans l'enseignement aux Etats-Unis

KRONMAN, RUTH YSABEL, B.A.
(N.Y. State College for Teachers)
William Blake and His Forerunners in Mysticism

LEVITSKY, NATHAN ALEXANDER, B.A.
(McGill)
Customs, Terms and Symbols Connected with Trade and Commerce in Ancient Hebrew and Related Dialects

LUSHER, DAVID WILLIAM, B.A. (McGill)
Protection: And the Canadian Cotton Yarn and Cloth and Woolen Cloth Industries

MARSH, LEONARD CHARLES, B.Sc.
(University of London)
The Problem of Seasonal Unemployment: A Quantitative Analysis

MONTGOMERY, HARRIET ROSE, B.A.
(McGill)
Domestic Tragedy from 1721 to 1800

PUTNAM, ADELAIDE DONALDA, B.A.
(Mount Allison University)
Folklore and Balladry in Shakespeare

REYNOLDS, LLOYD GEORGE, B.A.
(University of Alberta)
The Occupational Adjustment of the British Immigrant in Montreal

ROUNTREE, GEORGE MEREDITH, B.A. (McGill)
The Employment and Unemployment Problems of the Railway Industry of Canada, with Particular Reference to the City of Montreal

SILVER, HELEN, B.A.
(N.Y. State College for Teachers)
The Significance of Milton's Political Theories

STONE, FRED VICTOR, B.A. (McGill)
Unemployment and Unemployment Relief in Western Canada

TAYLOR, GORDON R., B.A. (Queen's University)
The Chinese Schools in Canada

WEBSTER, EDWARD C., B.A. (McGill)
An Experimental Approach to Vocational Guidance

YOUNGE, EVA RUDER, B.A.
(University of Alberta)

MASTER OF ENGINEERING

CHIPMAN, ROBERT AVERY, B.Sc.
(University of Manitoba)
Electron Oscillations in Thermionic Vacuum Tubes

EVANS, DELANO ERNEST, B.Sc. (McGill)
An Investigation of the Effects Produced by Electric Arc Welding on a Steel Compression Member with an Analysis of the Distribution of Welding Stresses in Steel Plates

JADERHOLM, HENRIK WILHELM, Dip. Eng.
(Dresden)
Notes on the Design of Band-Pass Filters

O'SHAUGHNESSY, MICHAEL JEROME, B.Eng.
(McGill)
A Study of the Factors Affecting Grinding Efficiency in Ball Mills

RANKIN, ROBERT ARTHUR, B.Sc.
(Glasgow University)
Power Supply in Industry

SHAPIRO, CLARENCE HARRIS, B.Eng. (McGill)
Relay Protection of High Voltage Electrical Power Systems

STANLEY, THOMAS DOUGLAS, B.Sc.
(Arts, B.Sc.) (E.Eng.) (University of Alberta)
Analysis of Three Phase Networks by the Method of Symmetrical Components

WESTWOOD, ROBERT JAMES, B.Sc.
(University of London)
An Investigation into the Reactions that Occur During the Cyanidation of Gold Ores

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MASTER OF SCIENCE

BENNETT, ROBERT DOUGLAS, B.Eng. (McGill)
Statement: The Rate of Hydrogenation of Certain Oils

BILLINGSLEY, LAWRENCE WINSTON, B.Sc.
(McGill)
Carotene and Vitamin A

BYERS, ALFRED RODDICK, B.Sc. (McGill)
The Nature and Origin of the Glacial and Post-glacial Deposits Lying Between the City of Montreal and the Canadian Shield

CLARK, ANNIE ELIZABETH, B.A.
(University of New Brunswick)
Nebaliella Caboti N.SP. with Observations on Other Nebaliacea

DENIS, FRANK THEOPHILE, B.Eng. (McGill)
An Investigation on the Mineral Composition of the Ores of Noranda Mines Limited

ELKIN, EUGENE MITCHELL, B.Sc.
(University of Manitoba)
The Kinetics of Heterogeneous Gaseous Reactions Catalytic Decomposition of Methanol Over Solid and Liquid Zinc

EVANS, GERALD TAYLOR, M.D.C.M.
(McGill)
The Glycogen Content of the Rat Heart

HAMILTON, GEORGE HARVEY, B.A.
(Queen's University)
Studies on Halo-blight of Oats Caused by Bacterium Coronafaciens Elliott

HARRIS, JULIUS JACK, B.A. (McGill)
The Black River Group in the Vicinity of Montreal

HORWOOD, JAMES FRANCIS, B.Sc.
(Dalhousie University)
Studies in Organic Oxidation

KEATING, BERNARD JOSEPH, B.A.
(St. Francis Xavier University)
The Pre-carboniferous Rocks of the Wentworth Section of the Cobequid Hills, N.B.

KERSHMAN, JOHN, B.Sc., M.D.C.M. (McGill)
The Evolution of Cell Types in the Central Nervous Systems—Microglia

LAROCQUE, GERARD LOUIS, B.Eng. (McGill)
The Determination of the Solubility of Lime in Water and of the Sorption of Lime on Cellulose

LEVITT, JACOB, B.Sc. (McGill)
The Physiology of Cold Resistance in Plants

MACKINNEY, HERBERT WILLIAM
Dip. Ing-Chem. (Zurich)
A Study of the Structure of Lignin

MASON, CLARENCE TYLER, B.Sc.
(Northwestern University)
The Specific Viscosity of Acetaldehyde and of Acetaldehyde-Paraldehyde Mixtures

NOWOSAD, FRANK SAMUEL, B.S.A.
(University of Manitoba)
The Effect of Some Commercial Fertilizers on the Field and Botanical Composition of Permanent Pastures

POWER, RICHARD M. H., M.D.C.M. (McGill)
The Unstriated Muscle Fibre of the Female Pelvis

PULLMAN, JOSEPH CYRIL, B.Sc.
(Mount Allison University)
The Synthesis of Long Chain Polyethylene Ether Clycole and the Nature of Polymerization

RICHARDSON, LAURENCE ROBERT, B.Sc.
(McGill)
The Skeleton, and its Development in Catostomis Commersonii, (L.)

SCARROW, JAMES ALEXANDER, B.A.
(University of Western Ontario)
An Improved Semi-micro Kjeldahl Method for Estimation of Organic Nitrogen

SCHINDLER, NORMAN RUDOLF, B.Sc.
(Rhodes University College)
Geology of the Waite-Ackerman-Montgomery Property Duprat and Dufresney Townships, Quebec

SHAW, GEOFFREY THORP, B.Sc. (McGill)
The Effect of Chemical Treatments on the Celloidal Properties of Podsol Soils

SPECTOR, LEO LYON, B.Sc., M.D.C.M. (McGill)
The Elastic Fibres of the Heart Muscle in Various Age Periods and in Disease

WHYTE, JAMES HOWDEN, B.Sc.
(University of Edinburgh)
The Relation of Stomatal Opening to Temperature and Other Factors

WILSON, NORMAN LESLIE, B.Sc.
(University of Saskatchewan)
The Petrology of Mount Johnson, Quebec

DOCTOR OF PHILOSOPHY

ARMSTRONG, JOHN MAXWELL, B.Sc., M.Sc.
(University of Saskatchewan)
Cyto-Genetic Studies in Matthiola and Triticum

BARSHA, JACOB, B.Sc. (McGill)
The Structure of Synthetic Polysaccharides

BOYER, RAYMOND, B.Sc. (McGill)
The Action of Sulfuric Acid on Cyclopropane Ketones

BURTON, FREDERICK RENDALL, B.Sc., M.Sc.
(McGill)
Geology of the District About Lake Aylmer, Eastern Townships, Province of Quebec
(A report on a detailed investigation of a typical part of this section of the Appalachian region)

CRESSMAN, HOMER WILLIAM JOHN, B.S.
(Muhlenberg College), M.S. (Middlebury College)
The Addition Reactions of Vinyl Phenyl Ketone, III. Malonic Ester

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HALLONQUIST, EARLAND GRAND, B.A., M.A.
(University of British Columbia)
Synthesis, Structure and Properties of Cyclic and Bicyclic Acetals

HAMPTON, WILLIAM FORSEY, B.Sc.
(Dalhousie University), M.Sc. (McGill)
The Heat Capacity of Gelatin Gels

HASLAM, ROBERT NEWMAN, B.A., M.A.
(University of Saskatchewan)
The Stark Effect in the Ultra Violet Region of the Mercury Spectrum

HESS, ERNEST, Dip. Agr. (Zurich), M.A. (Queen's University)
Effects of Sub-optimal Temperatures on Marine Bacteria

HOLCOMB, ROBERT KIRKWOOD, B.S.A.
(McGill)
The Application of Densimetric Methods to Quantitative Analysis

KATZMAN, JOHN, B.Sc., M.Sc. (McGill)
The Growth of Space Charge in the Crookes Dark Space of a Geissler Discharge at Low Pressures

KUTZ, RUSSELL LAWRENCE, B.Sc., M.Sc.
(University of Alberta)
Studies on the Physiology of the Adrenal Cortex

MASSEY, ERNEST EDWARD, B.A.
(Bishops College)
Delta-Ketonic Esters

MOORE, LEONARD PATRICK, B.Ch.E.
(University of Minnesota), M.Sc. (McGill)
The Action of Sulphurous Acid on Cellulose

PRICE, AUBREY FARNHAM, B.Sc.
(Dalhousie University)
An Investigation of the Reaction Between Unsaturated Hydrocarbons and the Halogen Hydrides

PRICE, PETER, B.Sc., M.Sc.
(University of British Columbia)
The Geology and Ore Deposits of the Horne Mine, Noranda, Quebec

REEVE, HERBERT ARTHUR, B.Sc., M.Sc. (McGill)
A Comparison of the Kinetics of Homogeneous and Heterogeneous Gas Reactions

RICHARDSON, RONALD ERNEST, B.Sc.
(University of Alberta), M.Sc. (McGill)
The Sorption of Sodium Hydroxide from Liquid Phases by Various Celluloses; and Related Researches

SNELL, ARTHUR HAWLEY, B.A.
(University of Toronto), M.Sc. (McGill)
The Stark Effect in the Molecular Spectrum of Hydrogen

SPANAGEL, EDGAR WILLIAM, B.A.
(Lawrence College)
Anhydroacetonebenzil

STEWART, WILLIAM WESLEY, B.Sc.
(Dalhousie University), M.Sc. (McGill)
The Viscosity of Gases and Its Relationship to the Gas Laws

TAPP, JAMES STEWART, B.S.
(University of Western Ontario), M.A. (McGill)
An Investigation of the Density of a Vapor in Equilibrium with a Liquid Near the Critical Temperature

THORNTON, ROBERT LYSTER, B.Sc. (McGill)
The Stark Effect for Krypton

WEBSTER, DONALD ROBERTSON, B.A., M.D.C.M. (Dalhousie University), M.Sc. (McGill)
Studies of Gastric Secretion Under Normal and Some Pathological Conditions

WILLIAMSON, JOHN THOBURN, B.A., M.Sc. (McGill)
The Origin and Occurrence of the Chromite Deposits of the Eastern Townships, Quebec

WILSON, CHARLES VERNON, B.Sc., M.Sc.
(University of Saskatchewan)
Part I—The Stereochemistry of Certain Tertiary Amines
Part II—Studies on Lactols

WINKLER, CARL ARTHUR, B.Sc., M.Sc.
(University of Manitoba)
An Investigation of the Continuity of State in One and Two Component Systems

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Marriages

(Continued from Page 51)

CALDER—At Cowansville, Que., on July 29, Miss Margaret Elizabeth Draper, and Frank Calder, Sci. '30, of Arvida, Que.

CLAXTON—In Toledo, Ohio, on June 6, Miss Betty Laughton and Rev. John W. Claxton, M.A. '27, of College Congregational Church, Kansas City.

CLEVELAND—In Montreal, on July 14, Miss Jessie Cassils and Dr. Edward Thorburn Cleveland, Dent. '23, of Montreal.

COOK—In Ottawa, in June, Miss Rosanna Alice Stewart and Dr. Stephen Maynard Cook, Med. '24, of Montreal.

HARRISON—At Bowmansdale, Pa., on July 22, Miss Anna Blair Thornton and Dr. Winston Franklin Harrison, Med. '28, New York City.

LAIRD—In Montreal, on June 10, Miss Gretna Laird, past student, and John L. Rankin.

LANDE—In Montreal, on July 9, Miss Rhoda M. Lande, B.A. '29, and Dr. David Weintraub, of Brookline, Mass.

MACFARLANE—At Knowlton, Que., on June 21, Miss Eileen Elizabeth McLaughlin and Rev. Duncan Herbert MacFarlane, Arts '25, of Vankleek Hill, Ont.

MACLAREN-BELL—At Westmount, Que., on June 11, Miss Dorothy Allison Deimstatt Bell, Arts '30, of Halifax, N.S., and James Isbester Maclaren, Sci. '32, of Lockport, N.S.

MACRAE—At New Germany, N.S., on July 5, Miss Jessie Hanna MacRae, Soc. Workers '32, of Montreal, and Rev. William R. Fraser, of Trenton, N.S.

MASON-JOHNSON—At Westmount, Que., on July 17, Miss Elsie Copland Johnson, B.A. '29, and Orley Batcheller Mason, Sci. '33, both of Montreal.

McKIM—In Montreal, on June 8, Miss Joan McMaster and Anson Coutes McKim, Com. '25, of Toronto.

MILLIGAN—At Cornwall, Ont., on June 14, Miss Iris Marjorie Gogo and Dr. William Andrew Milligan, Med. '28.

MILLS—In Montreal, on June 29, Miss Madeline Wynne and [illegible] Gordon Mills, Sci. '26, both of Montreal.

PITTS—In Ottawa, in July, Miss Elsie Georgina King and Clarence McLeod Pitts, Sci. '14, of Ottawa.

POLAND-LANE—On June 1, 1932, Miss Phyllis Anne Lane, Arts '32, and Fred E. Poland, past student, Arts '30, of Winnipeg.

QUINTIN—At Ile Bizard, Que., on June 24, Miss Isabel Mary DeBlois and Dr. Thomas James Quintin, Med. '30, of Harbour Grace, Newfoundland.

RICE—In Montreal, on May 25, Miss G. A. Pauline Lister, of Woodstock, N.B., and Dr. John Henry Melville Rice, Med. '33, of Montreal.

SAUNDERS—In July, Miss Evelyn Howard, daughter of the Hon. Mr. Justice Howard, Arts '95, Law '98, and Mrs. Howard, to John Spencer Saunders, Sci. '32, of Montreal.

SAVAGE—In London, England, on June 12, Miss Mae Lucy Savage, B.A. '27, M.A. '30, and Alfred Melrose West, of Montreal.

SIMPSON—In Montreal, on June 17, Miss Marjorie Douglas Weir, daughter of the late Hon. R. Stanley Weir, Law '80, to Albert Edward Simpson, Sci. '33, of Montreal.

SISE—At London, Ont., on June 24, Miss Margaret McConnell and Philip Fleetwood Sise, Arts '31, son of Paul F. Sise, Sci. '01, and Mrs. Sise, of Montreal.

SNOWDON—On July 15, Miss C. Virginia Snowdon, B.A. '33, and Archibald S. Lewis, of 4906 Queen Mary Road, Montreal.

THOMPSON—At Peterborough, Ont., on June 24, Miss Anne Hewitt Amys and Trevor Creighton Thompson, Sci. '19, of Montreal.

WASS—In Montreal, in June, Miss Marjorie Wass, B.A. '32, and Frank H. Rand, of the Royal Military College, Kingston, Ontario.

WILSON—In Montreal, on July 19, Miss Elizabeth Barbara Harbert and Percy Roy Wilson, Arch. '24, both of Montreal.

Personals

(Continued from Page 53)

DONALD L. MORRELL, Com. '29, who has been Assistant Secretary of the Canadian Chamber of Commerce, has now been appointed Editor of its publication, "Canadian Business."

DR. ARTHUR B. WADE, Med. '32, has been appointed Senior Resident Physician at the Montreal Homœopathic Hospital.

J. ALEX. EDMISON, Law '32, has become associated with R. L. Calder, K.C., Law '06, in the practice of law in Montreal.

EDWARD H. JOHNSON, Arts '30, a graduate of the Princeton Theological Seminary, has been licensed to preach by the Presbytery of Montreal, Presbyterian Church in Canada.

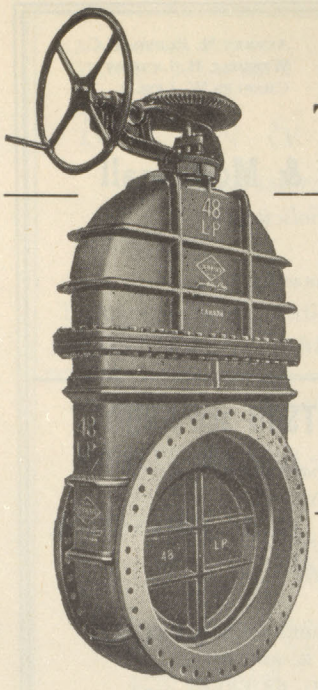
REV. THOMAS J. WATSON, Arts '32, a recent graduate of the Montreal Presbyterian College, has been ordained to the ministry and inducted into the pastoral charge of the Presbyterian Church at Georgetown, Que., succeeding the Rev. Dr. George Whillans, Arts '82.

Press Clippings

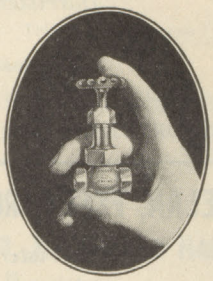
FRANCIS W. MACLENNAN, Sci. '98, LL.D. '31

(From the Arizona Daily Star, August 17, 1933.)

The compromise valuation of $6,000,000 reached in Judge Sames' court on the valuation of the Miami copper mine at Miami carries in it a story not generally known or appreciated by the public. It is a story of how man's ingenuity when under pressure can accomplish great things.



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Ten years ago it was generally thought that the Miami mine was done. All of the high grade ore was exhausted. A vast amount of low grade ore averaging less than one per cent. remained. How this ore could be mined at a profit was a problem which most mining engineers thought could never be solved. However, Miami had one great asset, its general manager Frank Maclennan, who was determined that this low grade ore could be made into copper on a commercial basis. Maclennan devised a scheme of stoping the ore, and made new improvements in milling which enabled the Miami mine to produce at a handsome profit as long as copper remained above 12 cents. As a result of his work the Miami mine was brought back, and although it was known as a high cost producer, with the favorable price of copper that prevailed from 1924 to 1930, the mine paid millions in wages and taxes, and millions in dividends. Thus one man's ingenuity and determination turned what many thought was just a great mass of dirt, into a profitable copper mine.

But the real test was to come later. When the great break in copper prices came in 1930 and general consumption of the red metal came to a halt, Miami again appeared to be doomed to extinction. As the price of copper broke through eleven cents and skidded on down to six and five cents, Miami as a producing mine seemed to be a thing of the past. But still Maclennan refused to concede defeat. By experimentation, ingenuity, determination and hard work he evolved a new process for handling the low grade ore of the Miami mine. He worked his costs down to 6.8 cents a pound. With copper selling at nine cents, Miami can now produce at a profit, assuming of course, it can run at full production, and sell its output. Thus once more a great mine of the state has been saved by one man's ingenuity.

The compromise valuation of $6,000,000 placed on the mine for taxation purposes is fairly high when the ore content of the Miami mine is matched with the ore content and valuations of other mines in the state. But the remarkable feature about it all is that through Maclennan's genius this mine instead of reverting to the public domain as many thought it would, will remain in the ranks of the state's producing mines and spend more millions for wages, supplies and taxes.

Mr. Maclennan's work is one of the great achievements of the state, and the entire mining world. He has done what others have thought to be impossible. Had it not been for his genius and never-ending determination, the Miami mine

and the town of Miami would be another Silverbell, while the valuation of $6,000,000 for tax purposes would read more like $6000.

JOHN DELISLE PARKER

(Author of an article on Frontenac in this issue of The McGill News)
(From the Chicago Daily News)

The works of John Delisle Parker take one from the Latin Quarter to the hills and villages of North Africa—a long voyage, but easily explained by Mr. Parker's own story. This story climaxes in the double honor paid him in France where the French Government hung his 69 works, which is more than were exhibited by any other painter, at the Colonial Exposition; and a French publisher, the *Edition de la Centaine*, selected him as the artist to illustrate the Fifth Centenary Edition of the *Poems of François Villon*.

The Latin Quarter is home to Parker, who has spent more than 20 years in it, studying its architecture, its history, and its legend. Every one of the eight full-page hand-colored plates, and each of the 34 drawings that make the Villon book an art treasure, show this love and understanding of the life of the Latin Quarter as it was lived in the Middle Ages.

BORN IN NEW ENGLAND

Though born in New England, Parker was brought up near Stratford-on-Avon, where his father was American consul, and he studied in Paris under the last of the great historical and romantic painters, Jean-Paul Laurens. He is thoroughly steeped in the technique of that colorful period.

As far as North Africa is concerned, Parker spent a fascinating month there in his boyhood, and when the end of the War left him sufficient leisure, he went back there. Dressed as a native, he travelled from one end of the land to the other. His paintings show scenes from village life, artisans at work, colors on African sands and hills, strange and thrilling streets and houses.

AIDED BY FRENCH

Because the French Government was keenly alive to the historical value of what he was putting on his great canvases, whole companies of soldiers in action were put at his disposition to do what he wished with. An extraordinary opportunity, but his exhibits at the Colonial Exposition showed that the French authorities knew what they were doing.

In America his art is to be found in the museums

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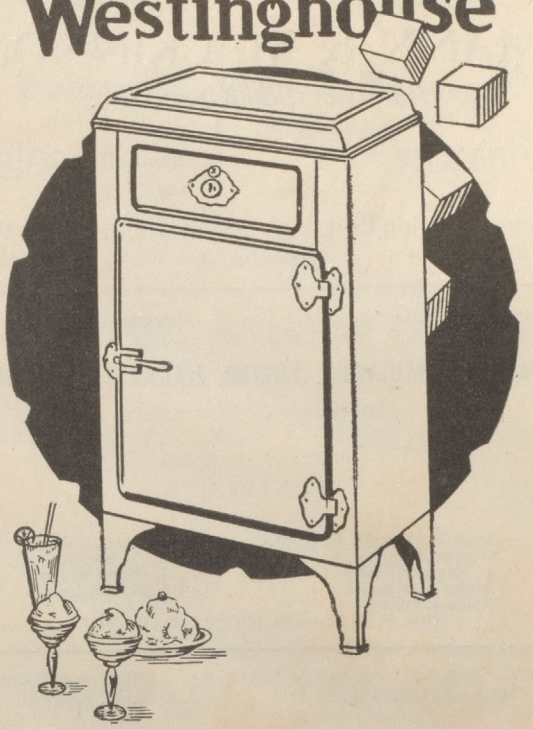
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of Boston and New York, the Museum of Natural History at Valley Forge, the National Museum in Washington. Canada and Australia have also purchased his works, and many examples are hanging in France.

DR. R. TAIT McKENZIE, Arts '89, Med. '92, LL.D. '21

(From Country Life, London, England)

The list of Dr. R. Tait McKenzie's war memorials is as follows:

1. "The Call."—Scottish-American War Memorial in Edinburgh.
2. "Blighty."—Statuette of Seaforth Highlander, in His Majesty the King's collection, Balmoral Castle, Scotland.
3. Captain Guy Drummond, in the Canadian Archives, Ottawa.
4. "The Aviator."—Memorial to Lieut. Morton Downes, in St. Paul's School, Concord, Vermont.
5. Lieut.-Col. George H. Baker, M.P., Canadian Infantry—Memorial in the Lobby of the House of Commons, Ottawa.
6. American Legion Boys' Medal.
7. American Legion Girls' Medal.
8. Altar of Dedication.—Memorial to Captain Howard C. McCall, Church of the Saviour, Philadelphia, Pa.
9. "The Homecoming."—Memorial to the men of Cambridge, England.
10. "Over the Top."—The Radnor Memorial, in mezzo relief, St. Davids, Pennsylvania.
11. "The Volunteer."—Rosamond War Memorial, Almonte, Ontario.
12. "The Victor."—Memorial to the men of Woodbury, New Jersey.
13. General James Wolfe, in Greenwich Royal Park, England.
14. General J. G. Parke, American Civil War officer, Vicksburg Military Park, Vicksburg, Miss.
15. "Alma Mater."—The Girard College War Memorial, Philadelphia, Pa.
16. The Jane A. Delano Nurses' War Memorial, American Red Cross Garden Court, Washington, D.C.
17. Aviation Trophy, Canada, in memory of Capt. John Webster, formerly of the Canadian Air Forces.

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